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EDISON ELECTRIC INSTITUTE BULLETIN

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ELECTRICAL RESEARCH STATISTICS
THE ELECTRIC LIGHT AND POWER INDUSTRY

Current Statistical Data Covering 100 Per Cent of Industry

February, 1950-1951

SOURCE AND DISPOSAL OF ENERGY—MONTH OF FEBRUARY

	1951	1950	%
GENERATION* (Net)			
By Fuel Burning Plants	20,012,105,000	16,528,164,000	+21.1
By Water Power Plants	8,207,268,000	7,741,400,000	+ 6.0
Total Generation	**28,219,373,000**	**24,269,564,000**	**+16.3**
Add—Net Imports Over International Boundaries	114,275,000	101,396,000	+12.7
Less—Company Use	131,618,000	133,330,000	− 1.3
Less—Energy Used by Producer	565,629,000	333,251,000	+69.7
Net Energy for Distribution	**27,636,401,000**	**23,904,379,000**	**+15.6**
Losses and Unaccounted for	1,670,284,000	1,701,163,000	− 1.8
Sales to Ultimate Customers	**25,966,117,000**	**22,203,216,000**	**+16.9**

CLASSIFICATION OF SALES

NUMBER OF CUSTOMERS—As of February 28th			
Residential or Domestic	37,780,281	35,882,447	+ 5.3
Rural (Distinct Rural Rates)	1,597,766	1,543,509	+ 3.5
Commercial or Industrial:			
Small Light and Power	5,431,364	5,343,726	+ 1.6
Large Light and Power	246,787	225,846	+ 9.3
Other Customers	157,625	149,497	+ 5.4
Total Ultimate Customers	**45,213,823**	**43,145,025**	**+ 4.8**
KILOWATTHOUR SALES—During Month of February			
Residential or Domestic	6,973,887,000	6,017,494,000	+15.9
Rural (Distinct Rural Rates)	476,214,000	405,400,000	+17.5
Commercial or Industrial:			
Small Light and Power	4,651,966,000	4,076,452,000	+14.1
Large Light and Power	12,350,970,000	10,296,641,000	+20.0
Street and Highway Lighting	281,770,000	250,688,000	+12.4
Other Public Authorities	658,995,000	597,385,000	+10.3
Railways and Railroads:			
Street and Interurban Railways	323,880,000	303,852,000	+ 6.6
Electrified Steam Railroads	206,792,000	203,138,000	+ 1.8
Interdepartmental	41,643,000	52,166,000	−20.2
Total to Ultimate Customers	**25,966,117,000**	**22,203,216,000**	**+16.9**
Revenue from Ultimate Customers	**$467,200,400**	**$416,129,500**	**+12.3**

RESIDENTIAL OR DOMESTIC SERVICE

AVERAGE CUSTOMER DATA—For 12 months ended February 28th			
Kilowatthours per Customer	1,865	1,713	+ 8.9
Average Annual Bill	$53.34	$50.19	+ 6.3
Revenue per Kilowatthour	2.86¢	2.93¢	− 2.4

* By Courtesy of the Federal Power Commission.

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EDISON ELECTRIC INSTITUTE BULLETIN

Volume 19 MAY, 1951 No. 5

Accounting Problems and Procedures Examined at Joint AGA-EEI Conference

Attendance Tops All Previous Records

THE annual joint accounting conference of electric and gas utility accountants, held this year in Chicago, April 23-25, was the largest in attendance thus far recorded, the total number of registrants being 877. More important, however, than the increase in attendance is the fact that so many delegates stated that the meeting was the best yet experienced.

Thoughtful Planning

The two chairmen, Ralph H. Smith, The Cleveland Electric Illuminating Co., EEI, and Alan A. Cullman, Columbia Engineering Corp., AGA, deserve great credit for their thoughtful planning, as do their able vice-chairmen, E. L. Cassady, Indianapolis Power and Light Co., EEI, and R. F. McGlone, The East Ohio Gas Co., AGA. If this story were to name all individuals whose hard work resulted in so successful a conference, it would have to list all members of all accounting committees, both EEI and AGA, but it must be remembered that many committee members worked faithfully and effectively on papers and reports for committees of which they were neither chairman nor designated spokesman, and hence received no individual credit for their efforts.

A trend established last year was continued by allowing more time for free discussion. However, these discussions, in order to give more incentive for spontaneous participation, were purposely unreported. Many previously prepared papers were, however, distributed at the conference, and a complete set of all papers and reports available, constituting the "Proceedings" of the Conference, will in due course be sent to every registrant and every member company of both the EEI and AGA. Additional copies of the "Proceedings" may be obtained from either the Institute or the Association headquarters for a price set to cover the approximate cost of duplicating and mailing.

General Session

The opening General Session on Monday afternoon was conducted jointly by Messrs. Smith and Cullman. The three principal speakers were outstanding executives of electric or gas utilities. They were preceded by Col. H. S. Bennion, vice president and managing director of the Edison Electric Institute, who, in a greeting, stressed the importance of the accountant's contribution to successful management. George F. Mitchell, first vice president, The Peoples Gas Light and Coke Co., followed with a welcome

G. F. Mitchell, The Peoples Gas Light and Coke Co., welcomes delegates at the General Session of the joint AGA-EEI Accounting Conference. Speakers were (left to right) Col. H. S. Bennion, EEI vice president and managing director; A. F. Tegen, president, General Public Utilities Corp.; E. L. Lindseth, president, The Cleveland Electric Illuminating Co.; R. H. Smith, The Cleveland Electric Illuminating Co., chairman of EEI Accounting Division; Mr. Mitchell; A. A. Cullman, Columbia Engineering Corp., chairman of AGA Accounting Section; and J. F. Oates, Jr., chairman, The Peoples Gas Light and Coke Co.

to the city and an invitation to visit any of his company's offices.

The first of the three principal speakers was James F. Oates, Jr., chairman, The Peoples Gas Light and Coke Co., whose topic was "Human Relations." He made a plea for the recognition of individual personalities in the conduct of business, especially in the relationship of employer and employee, supervisor and supervisee, boss and worker. "The challenge of today," he said, "is to seek and find ways in which we poor, simple human beings can develop morally to the end that respect, confidence, understanding, and faith can replace prejudice, distrust, partisanship, and fear."

Accounts for Operators

Elmer L. Lindseth, president, The Cleveland Electric Illuminating Co., who followed Mr. Oates, chose for his subject "What Is the Operating Man Entitled to Expect from the Accountant?" He said that he wanted to give those present a few ideas of his own on this subject. He quoted Irving K. Dawes' dictum that "Accounting will have its fullest value in those companies whose accounting executives—in fact, whose full accounting organization—realize and practice the principle of 'Accounts for Operators' instead of 'Accounts for Accountants,'" and asked how many utility accountants lived by that creed.

Accounting reports to management should, said Mr. Lindseth, meet four principal requirements: first, they should record what happened; second, they should classify what happened according to functional areas of responsibility (a management endorsement of functional or responsibility accounting); third, they should interpret how good or bad the performance was (implying the establishment of standards of performance); and fourth, they should explain why the performance was as it was.

If the accountant will take the initiative in providing the operator with information he can use to make his operations more efficient, he will find the operating man eager to cooperate. "At least," said Mr. Lindseth, "I hope he will."

Albert F. Tegen, president, General Public Utilities Corp., spoke on "Winning Stockholders and Influencing Friends." His talk, delivered with illustrative slides, was a forceful, colloquial, and very frank plea for giving security holders the kind of information they really want instead of the kind some publicity expert thinks they ought to want. The speaker said the advertising man and salesman had too much to say about the preparation of financial reports and that the accountants knew better how to express financial facts clearly and succinctly and should have more responsibility for reports to security holders than salesmen. He illustrated with a number of examples, taken from actual reports, of what he considered the right and wrong ways to present facts, according to opinions that he had obtained through canvass of his companies' stockholders.

Group Meetings

As has been the custom, meetings on Tuesday and Wednesday, the second and third days of the Conference, were separated according to specialized fields of interest. Each meeting was arranged for jointly by standing committees of the EEI and AGA accounting organizations, except in the case of the Depreciation meeting (EEI) and the Materials and Supplies meetings (AGA), where the committee in charge of the program has no counterpart in the other industry. These group meetings included the fields of customer activities, general accounting, depreciation accounting, internal auditing, materials and supplies, plant accounting and property records, and taxation accounting.

Customer Activities

At the Tuesday morning session of the Customer Activities group the presiding officers were R. B. McCrorey, Georgia Power Co., and C. L. Havener, Consolidated Edison Co. of New York, Inc., coordinators, respectively, of customer activities for EEI and AGA accounting divisions. Three subjects were presented, each producing some lively discussion from the floor.

Russell B. Mitchell, The Peoples Gas Light and Coke Co., speaking on "Collection Follow-Up by Telephone," described some techniques of telephone contacts which had been found effective. J. Gordon Ross, Rochester Gas and Electric Corp., gave a talk which he entitled "Three P's in a Pod," in which he explained the practical application of good policies, procedures, and personnel in producing good public relations.

Austin W. Merchant, Michigan Consolidated Gas Co., told about some "New Solutions to Customer Accounting Problems." The sub-title of the paper, "There's Always Another Way," accurately describes its substance.

Luncheon Meetings

Tuesday noon was devoted to four luncheon meetings, which in the cases of the Customer Accounting, Customer Collections, and Customer Relations groups extended into the afternoon. The General Activities luncheon was merely an informal get-together group with no program.

The Customer Accounting luncheon, at which L. R. Quad, Public Service Electric and Gas Co., chairman of the AGA Customer Accounting Committee, presided in the absence of M. J. Walsh, chairman of the EEI Customer Accounting Committee, was devoted to a series of "Short Talks on Long Range Projects," describing progress made and future plans for studies which have not yet reached the stage for a definite re-

Members of the Internal Auditing group, including (seated left to right) P. J. Buzanga, Consolidated Edison Co. of New York, Inc., and H. R. Symes, The Detroit Edison Co., who presided jointly as chairmen; J. M. Trant, The Peoples Natural Gas Co. Standing are R. T. Hansen, Citizens Gas and Coke Utility; C. A. Ambrister, Oklahoma Natural Gas Co.; George Becher, The Dayton Power and Light Co.; J. K. Laurentz, The Brooklyn Union Gas Co.; and T. F. Cartwright, Amarillo Gas Co.

port. The projects mentioned and the persons who dealt with each were: "Directory of Customer Accounting Methods and Equipment," A. W. Merchant, Michigan Consolidated Gas Co.; "Preservation and Protection of Records," G. E. Curtis, Boston Consolidated Gas Co.; "Improving Meter Reading Efficiency," W. M. Penfield, Public Service Electric and Gas Co.; "Centralized vs. Decentralized Customer Accounting," A. B. Wilson, Georgia Power Co.; "Mechanized Cash Posting," A. C. Haake, The Peoples Gas Light and Coke Co.; and "Meeting the Manpower Shortage," R. A. Krauss, The Cleveland Electric Illuminating Co.

The Customer Collections group, with F. J. Flom, chairman, EEI Customer Collections Committee, and H. S. Hahn, chairman, AGA Customer Collections Committee, jointly presiding, had as guest speaker Kenneth R. Wells, vice president of the American National Bank and Trust Co. of Chicago, who spoke on "Collection Technique." Mr. Wells emphasized the individual approach with a minimum of mechanical routine, especially for a public utility enterprise in which good public relations are of the greatest importance. "Collection work," he said, "is a combination of drudgery and ingenuity—successful collection work requires the proper mixture of these two ingredients."

At this meeting, as at the luncheon meeting of the Customer Accounting group, there were also brief talks on long range projects: "Authorized Pay Station Practices," by W. E. Travis, The Cleveland Electric Illuminating Co.; "Better Collection Letters," by D. M. Arnold, Pennsylvania Power Co.; and "Budget Payment Plan for Gas Space-Heating Customers," by F. J. Maguire, Boston Consolidated Gas Co.

At a "Discussion Forum" which concluded the session, the following topics were taken up, with discussion leaders as indicated: "Consolidated Edison Company's Experiment with a Mobile Collection Unit," G. A. Kunz, Consolidated Edison Co. of New York, Inc.; "The Detroit Edison Company's Experience with Drive-in Pay Stations," G. S. Zilly, The Detroit Edison Co.; and "The Ohio Fuel Gas Company's Experience with Drive-in Pay Stations," H. S. Hahn, The Ohio Fuel Gas Co.

The Customer Relations luncheon meeting had for its presiding chairmen E. G. Prentice, NEGEA Service Corp., Cambridge, Mass., chairman, EEI Customer Relations Committee, and C. L. Digiovanni, The Laclede Gas Co., chairman, AGA Customer Relations Committee. After two brief reports on training employees to meet the public, "By Films," presented by D. E. Barr, The Ohio Fuel Gas Co., and "By Manual," presented by W. E. Brokaw, Public Service Electric and Gas Co., the session was entirely devoted to a discussion forum with topics and leaders as follows: "Improving Telephone Contacts," C. J. Berner, Wisconsin Electric Power Co., "Are District Offices 'The Thing'?," H. C. Smith, The Peoples Gas Light and Coke Co.; "Making All Contacts Count," H. R. Flanegan, Philadelphia Electric Co.; and "Hi, Neighbor!," W. E. Sturm, West Penn Power Co.

Customer Activities Group Together Again

On Wednesday morning the entire Customer Activities group, consisting of those interested in customer accounting, customer collections, and customer relations, reconvened under the chairmanship of the two Customer Activities Coordinators, R. B. McCrorey and C. L. Havener. The group first heard a talk by J. Douglas Elliott, The Detroit Edison Co., illustrated by slides, on the "Democratic Technique of Supervision." This was an informal presentation of a new approach which has been used by Detroit Edison for ironing out minor administrative questions by getting supervisors together and talking things over, without attempting to impose a superior's decision.

The remainder of the Wednesday morning session was devoted to a panel discussion, which actually took the form of a joint debate in which the listeners ultimately had a chance to participate themselves. The subject was "Monthly Billing vs. Other Billing." The monthly billing of electric and gas customers is still by far the most common practice in the two industries, but there is a growing number of persons who believe that money can be saved without injury to customer relations through bi-monthly or quarterly billing, with or without correspondingly less frequent meter reading and with or without interim payments "on account."

L. J. Rauh, Consolidated Gas Electric Light and Power Co. of Baltimore, acted as moderator. Those defending the orthodox monthly rendering of bills to customers were J. H. W. Roper, Washington Gas Light Co.; Paul Fry, The Manufacturers Light and Heat Co.; and J. C. Faris, Union Electric Co. of Missouri. Those who took the other side were J. D. Green, Philadelphia Electric Co.; S. C. Grant, Philadelphia Electric Co.; and G. A. Kunz, Consolidated Edison Co. of New York, Inc.

The proponents of monthly billing stressed customer resistance to payments at any less frequent interval than one month and also brought forward other objections, such as the increase in working capital required by less frequent collections, increased collection expense because of larger arrears, increase in unit cost per bill with smaller number of bills, and lessened attractiveness to collection agencies because of fewer bills.

Those who upheld bi-monthly or other billing periods greater than a month strongly emphasized economies in billing and collection costs. They insisted that customer dislike of less frequent payment for service bills does not exist widely or

At the Plant Accounting and Property Records meeting are (left to right) C. E. Raines, Niagara Mohawk Power Corp., and H. G. Eilers, The Cincinnati Gas & Electric Co., who presided jointly; E. D. King, The Detroit Edison Co.; J. F. Locke, The Detroit Edison Co.; and K. R. Watson, Philadelphia Electric Co.

strongly and can be minimized by an intelligent approach to the change.

Depreciation Accounting

At this meeting on Tuesday morning, the EEI Depreciation Accounting Committee, with its chairman, Alex. E. Bauhan, Public Service Electric and Gas Co., presiding, gave attendants an opportunity to hear and participate in discussions of some depreciation accounting problems evidently of great current interest. The number of attendants was nearly twice as large as had been anticipated, and the meeting had to be adjourned to a larger room.

The first paper was a review by M. R. Scharff, consultant, of New York City, of "What the Courts and Commissions Said About Depreciation in 1950." This brought down to date a similar review prepared by Mr. Scharff for the 1950 joint accounting conference. It summarized clearly and succinctly the leading depreciation decisions of the previous year.

A "Résumé of Depreciation Practices of EEI Member Companies" was presented by W. J. Foster, Jr., New York State Electric and Gas Corp. It was a summarization of replies received from more than 100 electric utility companies, giving important facts not generally available from published reports about methods and procedures used in determining depreciation charges and building up depreciation reserves.

The final feature of the Depreciation Committee meeting aroused perhaps the greatest interest. This was a symposium bearing the program title "How We Do It," in which representatives of seven utilities told in frank detail just how their companies dealt with the problem of accounting for depreciation.

W. G. Pilgrim, The Peoples Gas Light and Coke Company, spoke of his company's long experience with actuarial studies of plant survivorship. The interesting feature of these studies is that the life analyses and resulting accrual computations are made not by primary plant accounts but by some 117 categories of similar types of plant, which exhibit far greater homogeneity than plant classified according to the several primary plant accounts.

F. L. Lovett's presentation regarding the practices of the Rockland Light and Power Co. of New York was unique in that it described the highly successful application of the unit accrual method (with reserve interest at 3 per cent per annum) to a relatively large property, as contrasted with the more general use in the utility field of accrual methods based on group balances. His procedure also provides annual automatic reserve adjustment.

The contribution of Barnard Morse of Southern California Edison Co. emphasized the advantages of depreciation procedures involving reserve interest as used by his and other companies in California. He described continuing studies covering plant mortality characteristics, salvage, cost of removal, and the determination of depreciation annuities and reserve requirements.

F. E. Drapalik, in speaking of the depreciation practices of the Union Electric Co. of Missouri and its related companies, said that while annual accruals are in general predicated on lump sums or overall rates, accrual computations are nevertheless made by primary accounts for the purpose of allocating depreciation charges among the functional groups to meet regulatory requirements. He touched on the operation of the Missouri Public Service Commission General Order No. 38A, which undertakes to divide the earnings of reserve funds in an equitable manner between the utility companies and their customers.

The Virginia Electric and Power Co. was represented by H. R. Whiton, who described the company's planned adoption of an accrual method using the unit method for individual identifiable portions of "location" plant, while using the method based on group balances for the "mass" accounts. The proposed plan also makes provision for a rapid, systematic adjustment of deviations which may occur between book reserves and theoretical computed reserves. Interest at the rate of 6 per cent will be taken on reserves. He reported that life analyses were by use of the retirements variation of the simulation method.

Actuarial Method

V. L. Kohl of the Commonwealth Edison Co. and related companies said that plant survivorship by primary accounts was determined by the actuarial method at least once every two years. Therefrom annual accruals and theoretical reserves are computed by accounts, and as a whole, for comparison with depreciation provisions made on the company's books.

The recent interesting events in connection with the depreciation accounting of the Southern California Gas Co. were reported by A. B. Cates, general auditor of the company. The redetermination of the theoretical reserve requirement on the assumption of 4 per cent interest on reserves, and with accruals based on plant balances by accounts, indicated that book reserves were considerably in excess of requirements. Excess reserves, by agreement with regulatory authorities, were transferred in part to various other special purpose reserves as well as to earned surplus. The bulk of the excess is, however, to be disposed of by distributing it over the remaining life of the plant as a reduction of what would otherwise be the ordinary accruals.

Professor Robley Winfrey of the Iowa State College of Agriculture and Mechanics Arts also participated in the discussion.

General Accounting

The Tuesday morning session of the General Accounting group at which L. C. Provencher, The Detroit Edison Co., chairman of the EEI General Accounting Committee, and A. B. Dilworth, Northern Natural Gas Co., chairman of the AGA General Accounting Committee, jointly presided, was devoted to two topics. The first was "Financial Reporting," covered in a detailed report on a survey of the annual reports of 55 electric and gas utility companies. This was presented by F. H. Crissman, Columbia Engineering Corp., and consisted of 149 pages, mostly tabular summaries of items in financial statements showing comparisons of the way in which they were presented in different annual reports.

The second topic was a paper on "Management Inventory and Development of Accounting Personnel," delivered by Virgil K. Rowland, staff assistant, Personnel and Accounting Departments, The Detroit Edison Co.

On Tuesday afternoon, with the same presiding officers as in the morning session, the General Accounting group heard three guest speakers. The first was Carman G. Blough, research director, American Institute of Accountants, whose subject was "Current Trends in Accounting." He mentioned particularly the battle over the "all inclusive income statement," in which he felt that the somewhat dogmatic theories of SEC accountants and the more flexible concepts of the American Institute of Accountants had reached a fairly satisfactory compromise in the latest SEC regulations. He also devoted considerable

time to the question of restatement of values to reflect a permanent change in the price level and the accounting problems involved.

Dr. Melchior Palyi, financial adviser, author, and lecturer, Chicago, Ill., spoke on "The Accountants' Problem in War." He dealt principally with the profound economic changes inevitably produced by war and the accountants' difficulties in keeping up with them, stressing particularly the problems produced by inflation of the standard of value.

Edward M. Spencer, assistant treasurer, The Detroit Edison Co., gave a paper on "Pension Plan Accounting and Economics," pointing out the growing importance of this field. He particularly emphasized the right and the wrong concepts of the costs of past service benefits, making clear why the cost of providing future pensions measured by the amount of past service is a current cost and not a cost chargeable to the periods in which such service was rendered.

The General Accounting group had its final meeting on Wednesday morning. First O. K. Boyd, Consolidated Gas Electric Light and Power Co. of Baltimore, outlined the steps already taken and the proposed procedure to be followed in reviewing the tentative draft for a revised "Uniform System of Accounts for Electric Utilities," released for comments by the Committee on Accounts and Statistics of the National Association of Railroad and Utilities Commissioners. In doing so he also described a few of the more significant changes proposed.

Preservation of Records

Presented next was a paper on "Experience With Preservation of Accounting Records in England During World War II," by W. E. Wilkenloh, partner in the Cleveland office of Price, Waterhouse and Co. This contained some hints useful for American accountants in the event of another world war, which is, unfortunately, enough of a possibility to require careful consideration of measures for protecting vital records in case of enemy attack.

Mr. Wilkenloh was followed by H. S. King, Commonwealth Services, Inc., who presented some fundamental "Aspects of Cost Control." He pointed out in the beginning that, contrary to a widely held misconception, utilities had to keep rigorous control of costs if they wanted to have anything left for the stockholders from the revenue allowed them by regulatory authorities as a "fair return." He emphasized the importance of the human element in controlling costs, imbuing all employees with the attitude of keeping costs down. He pointed out that analysis shows that 59 per cent of operating costs are included in the categories of taxes and fuel and power purchased, which are practically beyond the control of management, and that of the remaining 41 per cent, 27 per cent is represented by wages and associated costs and 14 per cent by materials and supplies and miscellaneous expenses. These are the fields in which successful cost control must operate.

The meeting closed with an interim report on a project which is under way to get more "Effective Accounting and Control for Transportation Costs." Different aspects of the problem were discussed by M. J. Doan, The Cincinnati Gas and Electric Co.; R. H. Johnson, The Brooklyn Union Gas Co.; and A. R. St. Bernard, The Cleveland Electric Illuminating Co.

Internal Auditing

The Internal Audit group meeting on Tuesday morning had for joint chairmen H. R. Symes, The Detroit Edison Co., chairman of the EEI Internal Auditing Committee, and P. J. Buzanga, Consolidated Edison Co. of New York, Inc., chairman of the corresponding AGA committee. Mr. Symes first offered a report giving a general review of the joint work of the two committees. This was followed by three reports, the first on "Audit Manual Format," presented by W. T. Hofstetter, The Peoples Gas Light and Coke Co.; the second on "Auditing Case Histories," by J. K. Laurentz, The Brooklyn Union Gas Co.; and the third on "Audit Manual of Accounts Receivable," by C. J. Nichols, Consolidated Gas Electric Light and Power Co. of Baltimore. Each of these was followed by discussion. The "Audit Manual of Accounts Receivable" provoked some differences of opinion, and the "Case Histories," which were the actual stories of instances where the work of the internal auditor had resulted in the detection of fraud and the prevention of loss, aroused widespread interest.

Tuesday afternoon the Internal Auditing group devoted to "Shop Talk," a panel discussion which took up a number of questions of current interest to internal auditors. Prominent among these was the question of how far an internal auditor should be responsible for the verification of physical plant. It seemed to be the prevailing opinion that he ought to make an independent inventory, or at least check carefully any existing inventory, of such things as general equipment, meters, and line transformers which can readily be examined and counted, but that it was not practical for the internal auditor to go much further in verifying physical plant, although he should look out for any apparent discrepancies in property records.

Another controversial topic was the extent to which confirmation of accounts receivable is necessary in auditing electric and gas utilities. There still seems to be considerable difference of opinion and practice on this point.

Still another subject of current lively interest was the use of airplane surveys to measure coal pile stocks. There is a growing belief that this procedure, which

Pictured at the General Accounting meeting are (left to right) W. D. Sweetman, The Peoples Gas Light and Coke Co., chairman of AGA Employee Relations Committee; Virgil K. Rowland, The Detroit Edison Co.; A. B. Dilworth, Northern Natural Gas Co., AGA joint chairman at the meeting; F. H. Crissman, Columbia Engineering Corp.; L. C. Provencher, The Detroit Edison Co., EEI joint chairman; and E. E. Roll, The Detroit Edison Co.

has been used only for the past two or three years, is cheaper and at least as accurate for large stock piles as the more commonly used engineering surveys and calculations.

The Internal Auditing group concluded its program on Wednesday morning, which was devoted to the general subject, "How May the Internal Auditor Better Serve His Company?" The discussion leader was W. T. Hamilton, The Cleveland Electric Illuminating Co., and three ways in which the internal auditor can offer improved service were presented: "In the Training of Management Personnel," by E. R. Mellon, Washington Gas Light Co.; "In Evaluating Operating Performance and Personnel," A. J. Gregory, Wisconsin Electric Power Co.; and "In the Determination of Compliance with and Evaluation of Established Policies and Procedures," J. D. Hogan, Michigan Consolidated Gas Co.

Plant Accounting and Records

This group in its Tuesday morning meeting, where the joint presiding officers were C. E. Raines, Niagara Mohawk Power Corp., chairman, EEI Plant Accounting and Records Committee, and H. G. Eilers, The Cincinnati Gas and Electric Co., chairman, AGA Property Records Committee, undertook to deal with two subjects: "The Capitalization of Overheads" from the point of view of the man responsible for plant accounting and property records, and "Plant Cost Accounting Simplification." The discussion on the former topic featured a paper delivered by E. D. King, The Detroit Edison Co. The latter subject was presented by K. R. Watson, Philadelphia Electric Co., with J. F. Locke, The Detroit Edison Co., acting as discussion leader.

The Plant Accounting group met again Tuesday afternoon to discuss "Machine Accounting for Detailed Plant Records." The discussion centered around a paper having that title prepared by F. W. Ross, Pennsylvania Power and Light Co. Mr. Ross pointed out the growing use of punched card records for many plant items and gave some valuable illustrations from his own company's practice. Each company, however, has to consider carefully whether such records will save it money. Those companies which have machine installation for customer and other types of accounting, Mr. Ross said, are obviously in a better position to study the application of machine accounting to plant records.

On Wednesday afternoon the Plant Accounting group heard and discussed a paper by Joseph Rachor, audit manager in the Cleveland office of Arthur Andersen and Co., on "Adapting Plant Accounting Records to Depreciation Study Requirements."

Materials and Supplies

The AGA committee on Materials and Supplies held an open meeting on Tuesday morning under the chairmanship of O. G. Peterson, New York State Electric and Gas Corp. A brief report was made on progress in standard packaging, followed by a motion picture, "Transcontinental Pipe Line." The rest of the meeting was taken up by a panel discussion on materials control, which continued through Tuesday afternoon.

On Wednesday morning the group heard a paper on "Simplication of Stores and Accounting Operations" by C. J. Monica, Consolidated Edison Co. of New York, Inc.

On Wednesday afternoon Pat H. Butler, Jr., Washington Gas Light Co., described a plan for a "Materials Handling Equipment Service," which would try to do for stores operators what the "Accounting Developments Service" has been doing for electric and gas utility accountants, namely, to cull out the most promising new ideas for equipment, devices, preservatives, etc., and make them widely known throughout the industry by means of periodic bulletins. The plan is still in its initial stages and no bulletins are likely to be issued before 1952.

Courtney Johnson of the National Production Authority, United States Department of Commerce, described in general terms the "Controlled Materials Plan," which is scheduled to go into operation by July 1, 1951.

Taxation Accounting

The two Taxation Accounting Committees arranged an open meeting on Wednesday morning, at which the presiding chairmen were R. M. Dodds, Ebasco Services, Inc., chairman of the AGA Taxation Accounting Committee, and L. F. Scholley, vice chairman, EEI Taxation Accounting Committee, in the absence of EEI Chairman Charles Wigand. The program offered first a paper by L. A. Diamond, attorney, Chadbourne, Wallace, Parke, Whiteside, Wolff and Brophy, who spoke on the "Highlights of Excess Profits Taxation," ably clarifying an exceedingly complex new statute.

Mr. Diamond was followed by J. R. Weger, Consolidated Gas Electric Light and Power Co. of Baltimore, who gave a helpful summary of "Recent Rulings, Tax Legislation, and Related Matters." Mr. Weger's paper was supplemented by another prepared and delivered by W. S. Alt, Union Electric Co. of Missouri, on "Recent Significant Tax Cases," which threw a helpful light on current trends in legal and governmental attitudes toward tax problems.

The session concluded with a brief question and answer period.

Entertainment

In recent years it has been customary for the conference attendants to relax and enjoy themselves at the Tuesday evening dinner, and this year was no exception. The chief fun-maker was a gentleman introduced as Coach Fumble, "The Coach of Siwash College," who told his audience a pathetic tale of the "Headaches of a Football Season." At the close of his performance he was introduced in his true character by Roy McCrorey, Georgia Power Co., as Warren Foster, an officer of the Coca-Cola Company of Atlanta, Georgia.

The Peoples Gas Light and Coke Company in its capacity as host to the visitors was a generous and thoughtful one. Its representatives distributed information helpful to Chicago visitors, gave a very pleasant luncheon Monday noon for guest speakers and committee chairmen, and arranged the details for a "Ladies' Day" program.

Exhibitors

Exhibitors of accounting machines and accounting devices and equipment included:

Addressograph Multigraph Corporation
The American Perforator Company
Burroughs Adding Machine Company
International Business Machines Corporation
Marchant Calculating Machine Company
Monroe Calculating Machine Company, Incorporated
The National Cash Register Company
Remington Rand Incorporated
Rol-Dex Division, Watson Manufacturing Company
Standard Register Company

What Is the Operating Man Entitled to Expect from the Accountant?

By Elmer L. Lindseth

President, The Cleveland Electric Illuminating Company

An address before the National Conference of Electric and Gas Utility Accountants, Chicago, Ill., April 23, 1951

BECAUSE I am an engineer and have had experience only in operating phases of the utility business, my contact with accounting has been on the receiving end. I possess no technical competence in the accounting field. I approach my subject today strictly as an operating man who wants—and needs—better accounting reports as tools to help him in his day-to-day job.

Accounting for Operations

In so limiting my approach, I therefore exclude from the discussion such important phases of accounting as property accounting, tax accounting, and even general accounting. Each is an exacting area, and a significant one to the operating man as well as to many others. But today I'd like to talk solely about accounting for operations and how such accounting may become an improved tool for operating management.

The term "operating management" I use in its broadest functional sense. For our purpose today, let us consider "operations" as embracing both staff and line functions in all phases of company activity—operating, maintenance, and construction—and "management" as including supervisory as well as executive levels.

We are probably agreed that the functions of business management are twofold: planning and control. Accounting can be of great assistance to operating management in the solution of problems in both of these areas. The need for improved accounting reports which perform this service is great, as are the opportunities and rewards.

"Bringing Figures Alive"

The accountant who supplies the need must be primarily a competent business executive; only secondarily need he be an accounting technician. He must present his facts and figures in operating terms to satisfy demonstrable operating requirements. Like B. E. Puckett, who was drafted from accounting to become at the age of 35 president of Allied Stores, he must be "more interested in bringing figures alive than in working with them for their own sake."

Irving D. Dawes points up the accountant's opportunity for service this way: "Accounting will have its fullest value in those companies whose accounting executives—in fact, whose full accounting organization—realize and practice the principle of 'Accounts for Operators' instead of 'Accounts for Accountants.'"

Let's ask ourselves here today: How many utility accountants live by that creed?

Just what is the operating executive entitled to expect from the accountant in the way of tools for planning and control of his operations? Is he not entitled to apply the Paton yardstick which says: "Unless accounting is useful—unless it affects the pattern of our thinking constructively, so that we get a more discriminating view of business, and a more realistic and in a sense a more accurate view at that—then it is not accomplishing very much."

Obligation Not Being Met

This expectation that accounting be a constructive, forward-looking force within the company certainly cannot be said to be an unreasonable one. Yet there is reason to believe that the obligation it places on utility accountants is not now being met at many of our companies.

Utilities today share with American industry generally the heaviest management responsibilities we have ever been called upon to face. If we are to discharge those responsibilities properly, we must achieve even higher standards of performance in the utilization of money, manpower, and materials. We must constantly do more with less.

The adequacy of our accounting operations will play a major part in the determination of our individual and collective success as companies and as an industry. In this situation, certainly, there is no room for the narrow concept of the accounting function which recognizes only the obligation to "record historically, subject to law and to a set of principles, the economic events that take place during the business life of an enterprise." We might well examine our companies' accounting operations carefully and critically against the scale of service to operating management and initiate positive action to eliminate whatever deficiencies may be discovered.

What criteria can we use in such an examination? What does the operating man need? What is he entitled to?

Report Requirements

Operating management, it seems to me, needs from the accountant operating and control reports which meet four primary requirements. Such reports should:

1. Record what happened—in revenues, expenses, costs, earnings;
2. Classify what happened according to who is accountable— that is, according to functional areas of responsibility;
3. Interpret how good or bad that performance was;
4. Explain why the performance was as it was.

In short, accounting operating reports should answer the questions: *What* happened? *Who* is responsible? *How* good was it? *Why* was it that way? Many of you, no doubt, are reminded of Kipling's lines:

I keep six honest serving-men
(They taught me all I knew);
Their names are What and Why
and When
And How and Where and Who.

Question Constantly

Operating management urgently needs the services of such "serving-men" today and I know of no better place to put them to work than in the accounting department. The accountant who truly serves will ask those questions constantly,

dig for the answers, and incorporate in his control reports the answers to *What?, Who?, How?,* and *Why?*

Now the operating man, beginning with the president, is entitled to reports which tell what happened in terms which have meaning to him personally. The accounting reports of utilities generally record adequately on an over-all basis what happened in the period under review. This is done in the conventional reports to executive management, stockholders, regulatory authorities, and the public—reports highly useful to the operating executive.

Functional Areas of Responsibility

This is the "historical," regulatory report area in which utility accounting is doing a good job and must continue to do so. But you can't truly plan and control a company's operations with no more information than this. If accounting gives us only a numerical summary of last month's earnings, then certainly it is in a mighty confining strait jacket, and accountants had better do something to get it out—fast.

The operating man isn't satisfied, or at least shouldn't be, with reports which tell merely what happened over-all. He needs company performance broken down and segregated by major executive functional areas of responsibility—that is, classified according to who is responsible for what happened. He needs more than that. He needs reports which subdivide still further to individual departments or responsibility groups, which are being held accountable in the control process for costs or performance in specific areas.

From the operating viewpoint, in short, accounting control reports must record not only what happened over-all, or even what happened by accounts in accordance with prescribed classifications, but also what happened according to functional responsibilities of individuals —people.

Tailored Reports

What is adequate for the president is ill adapted for the department head or foreman. Conversely, what is desirable for the latter may be too detailed for the president's use. It is apparent from this that each level of operating management must have separate reports tailored to its specific responsibilities and its specific needs.

The cost of preparing and distributing reports imposes practical limitations on how far we can carry this individual tailoring process, of course. Every report issued must justify its cost in usage. But trying to get too much mileage from a single report—trying, for example, to make the president's report do the full control job all along the line—is itself inherently inadequate as well as illogical.

Accounting control reports must, therefore, establish individual responsibility for the performance they record. They cannot do this unless they relate performance to the company organization chart rather than to the uniform classification of accounts.

This is far too rarely done. Yet it is a most important requirement. In the words of John A. Donaldson: "Many sets of accounts are worthless for management budgeting and for effective expense control because they do not recognize fully the necessity of relating figure facts on each activity directly to the responsible individual."

As a consequence, an essential requirement of accounting reports for the operating man is that they be functional, that they be truly responsibility reports. They must record not only *What?*, but *Who?*, as well.

Even More Vital

Important as they are, however, *What?* and *Who?* are the simplest of the primary queries accounting reports can reasonably be expected to resolve. The more difficult *How?* and *Why?* questions are even more vital, since an accounting report acquires true significance to operating management only as it interprets and explains the performance it records and classifies.

The accountant who tells only what has happened in the business over a given period places himself in the position of the WPA worker who reported to his boss that he was making progress in reading road signs. "I can read how far," he said, "but not where to." Operating management expects accounting to furnish the missing answer of destination as well as distance.

Is that being done today, at your company and mine? Do our routine reports tell *how* good or bad the performance under review was? Here we enter a relative area. Performance is satisfactory or otherwise only as related to a set of acceptable standards. Do we have adequate standards to work with?

Every company has one such measuring rod—corresponding results for prior periods. This is the most widely used single standard, and a fairly good one when employed in conjunction with others. But it alone won't suffice; it does not adequately allow for variables of time and circumstance.

A standard designed to meet this objection is the budget forecast or estimate. Assuming that it employs the same units as are used for control, the budget or planning forecast gives us an opportunity to compare actual achievements with near-term predictions. If frequently revised to keep it in line with changing economic conditions and properly applied, the budget is truly indispensable to both effective management planning and control. Many use it and regard it as invaluable.

Lack of Budgets

Yet Leonard P. Spacek pointed out at this conference just two years ago that "many utilities do not even have budgets." Others virtually destroy the control value of their budgets by failing to relate them closely to individual responsibilities. And most budgets have practical limitations as instruments of control, inasmuch as they are usually subjectively determined by the very individuals for whom they serve as a standard of achievement.

More objective standards of potential performance are urgently needed. Engineered standards based on time and motion studies are desirable for this purpose, particularly in the construction field, where they are the very foundation of standard costs. It seems axiomatic that no service business such as ours, in which labor is a prime cost, can afford to forego the application of a costing and measurement technique designed around labor efficiency. Yet how many of our companies are now using engineered standard costs as tools in the control process?

Essential to Appraisal

These three internal company criteria —performance in prior periods, budget forecasts, and standard costs—are essential to an intelligent appraisal of the *how* of current results. They should be supplemented with a fourth criterion—measurement against other utility companies and, wherever applicable, other industries as well.

We constantly hear it said that "our industry is different" or "our company is different," and hence not comparable to non-utility experience. Too frequently

these protests are alibis rather than explanations. The fact is that many of our operations are comparable to corresponding operations in other companies and industries, and readily lend themselves to measurement and comparison, if we would but do the job.

After the *What?*, *Who?*, and *How?* questions have been answered, the *Why?* remains; the result must be explained. Just why did we attain a particular level of performance instead of a higher or lower one?

The Why of Cost

The task was well pointed up by Eric A. Camman before the American Institute of Accountants when he said: "The ascertainment of the cost of an operation or a product is a relatively minor feat. To tell an executive or department head how much a cost is does not suffice. He wants to know why. Why is it so high?"

To arrive at this answer, the accountant must exercise genuine skill in human relations. He must be able to sit down with operating people and analyze performance in terms of causative factors. This requires a basic familiarity with the operation involved which often he does not have, as well as a cooperative spirit and a facility of non-technical expression.

T. R. Hosick emphasizes that to do this job the accountant "must learn to interpret the results of his work in understandable language," for "lack of understanding of his report by those responsible for efficiency and accomplishment will destroy its value and limit the accounting department to a very narrow field."

It is, of course, standard procedure in accounting control work to flag areas departing from expected performance and to note the deviation in a variations report. Does accounting stop there today at your company and mine? Or do our accountants consult the operating people in the trouble area in an honest effort cooperatively to ascertain the reason why?

Living in an Ivory Tower

Cooperation and consultation demand the participation of at least two parties. Accountants often have charged, with considerable justification, that they cannot gain an attentive audience from operating people. Operating people assert, probably with equal justification, that accountants live in an ivory tower.

Now as John A. Beckett has said, "The accountant emerges as a team man or not at all." It is up to him, as a team man, to take the initiative in overcoming whatever operating resistance he may encounter. If he does that, he will find that operating people are fully as interested as he is in the solution of their problems. At least, I hope he will.

In order to eliminate poor performance or maintain good performance, we must first identify the causes. To do that the accountant almost invariably must go to the proper operating man, who probably alone can determine the answer. The explanation thus obtained should be a part of the accounting control report. The accountant's primary report responsibility probably ends there. Yet it is precisely at this point that the alert accountant may open up a whole new field of inquiry.

Does this particular operating man have all the data he requires, and does he know how to use it most effectively? What additional information would be helpful to him? Can accounting furnish that information? In just such informal interchange, purely a by-product of tracing down the *Why?* of one operation, are new areas of accounting inquiry uncovered, and the whole informative cycle of *What?, Who?, How?, Why?* again begun.

Let's ask ourselves: Is that sort of interchange going on today at my company?

Significant Only When Integrated

While we have necessarily separated *What?, Who?, How?,* and *Why?* for discussion purposes, there is only the finest line of demarcation between them. They are interrelated and interdependent, and reach true significance only when tied together to form an integrated whole in our system of accounting reports.

How is that done? There are dozens of ways. How do such reports look? They take dozens of forms. And properly so.

Let's visualize, for example, the overall company operating reports. The conventional balance sheet and income statement are there, to be sure, presented on a comparative basis as against both prior period and budget forecast. This customary presentation is supported, though, by additional schedules, according to functional responsibility, of labor and other-than-labor expense, expressed in dollars, man-hours, and employees, reported overall and unitized, utilizing numerous tables, graphs, and charts, and amplified by narrative explanation of the results.

The *What?* and *Who?*, and to some extent the *How?* answers, thus appear as tabular or columnar listing of numerical data, while the rest of *How?* and all of *Why?* are resolved in expository paragraphs which far transcend the conventional footnote device.

There are, of course, any number of specific reporting methods which can be used to implement the general information requirements I've indicated. It would certainly be presumptuous of me to try to tell you experts how to design your reports. Like other operating men, I should be content to tell you what we need and leave to you the determination of the form in which the required data will be presented.

Method of Presentation

The method of presentation is important only to the extent that it emphasizes and develops the basic content. The report is, after all, worthless unless it is used, and it will generally be used in direct proportion to the effectiveness with which it gets its message across.

Once an accounting department has keyed its functions to the interpretive and explanatory needs of operating management, it inevitably will find many collateral opportunities for expanding its contributions to successful planning and control of the business. It will provide information invaluable in the making of management decisions as to whether to scrap or modernize a specific piece of equipment. . . contract or perform a certain job. . . make or buy a given item. . . conduct a particular operation manually or automatically. . . and a host of others.

Decisions of this type require data which the accountant should supply. They involve an expert knowledge of applicable overheads, fixed and variable, and indirect costs. These are areas not often adequately considered in utility management decisions, important though they are.

Standard Control Technique

A standard control technique in manufacturing, construction, and repetitive processes is the comparison of actual with standard unit costs established by modern industrial engineering techniques and time and motion studies.

The number of operating, construction, and maintenance activities in the utility industry which lend themselves to such treatment is vastly greater than appears at first glance. Likewise, the num-

ber of respects in which phases of our operations may be compared with and measured against those of other companies is much greater than commonly realized. It is a valid question whether in our industry we are taking advantage of such opportunities to employ the tests of "measured performance."

Moreover, are we reporting and evaluating results not only in dollars but also in man-hours, employees, or other physical units? The accountant who is not doing so is certainly overlooking an opportunity for service, particularly in this inflationary era when the dollar provides no stable basis for planning and control. We might well bear in mind that for the average operating man, the prime element of controllable cost is labor, not money. But I won't dwell on these points in detail. Rather, I'd like to leave these thoughts only as ideas or broad objectives.

Need for Accountants

Now to accomplish these objectives takes people—people and brains and skill. If we are to enlist accounting in full-fledged service to operating management at our individual companies, we will need many more qualified accountants of top-flight management capacity and potential.

We will have to assist the people we now have in our accounting departments to reach their highest level of competence by providing them with company executive development programs which fully merit the term, which do not stop with mere "job training" but include rotation of assignment, participation in community, industry, and professional activities, and many non-job-related functions amounting, in short, to an education in the social and professional responsibilities of businessmen.

Recruiting Systems

To augment our present staffs, we will have to employ hard-hitting recruiting and selection systems which will enable us to attract into accounting high-potential young people who can be developed into first-class management accountants. And we will have to do more than that. We will have to cooperate actively with educators to improve the quality and expand the scope of undergraduate accounting education.

T. F. Bradshaw points out in his book, *Developing Men for Controllership*: "In general, young men of broad executive potential are not being recruited for careers in the controller's organization. Business has not been able to obtain men of as high caliber for its figure area work as it has for its sales or production work . . . The all-round men, the leaders of the class, seem to avoid accounting as a career."

Competition for Talent

The job of correcting this condition will be tougher than ever in the present period of intense nationwide competition for professional talent. But it's got to be done, and done now, if utility accounting is to be equipped to satisfy the urgent and growing demands of operating management.

During the deliberations of the next two days and following our return home, it might be well for each of us to appraise his company's accounting practices against these standards required for maximum service to operating management. The company which is doing a first-class job in this respect will not be difficult to recognize.

First, its accounting operating reports will *interpret, explain,* and *fix responsibility for,* as well as *record,* performance. They will record performance, not only over-all and by conventional accounts but also in accordance with lines of functional responsibility, as defined by the company organization chart. They will measure current performance against prior periods, budget forecasts, and engineered standards within the company, and against comparable results without. And they will explain the *Why?* of performance as determined in cooperative consultation with the operating people responsible.

Second, in addition to these primary operating reports, the accounting department will be issuing collateral reports which measure results in man-hours and other physical units and which provide operating executives with unitized costs, giving effect to overheads and indirect costs.

And, finally, the company will be aggressively recruiting, selecting, training, and developing its accounting staff, and inspiring every member to exert his best efforts in expanding accounting's service to operating management.

Let's ask ourselves frankly: how many of these requirements are fully met by accounting in my company today?

Major Job of Improvement

The company in which accounting is only partially satisfying the needs of operating management has a major job of improvement to do. And, certainly, the perfect accounting organization is an exceptional one. Self-appraisal will convince most of us, I think, that there is a great deal still to be done at our companies in putting accounting to work for the operating man.

With that in mind, let's pull up our socks and go to work.

New Booklet for Use of Electric Companies and Dealers Promotes "Electrical Living"

"DREAMS Come True When You Live Electrically," a large promotional booklet for use by electric light and power companies and cooperating dealers to promote "electrical living," has been released by the Edison Electric Institute.

Colorfully Printed

Attractively printed, it contains full-color illustrations which show kitchen, bath, laundry, living and bed rooms, fully equipped with various electrical appliances. The copy is informally slanted to women, with emphasis on the fact that more leisure time is available, tasks are made easier, and home decorative effects are made more interesting and appealing through the use of electrical appliances and lighting.

Varied Uses

Designed for distribution to customers by operating electric companies and cooperating dealers, the booklet may be used to excellent advantage at home shows, demonstrations, women's group meetings, home economics classes, housewares shows, and for dealer displays.

"Dreams Come True When You Live Electrically" is available from the Commercial Department of the EEI at $5.00 per 100, in minimum quantities of 100. Orders should be addressed to the Commercial Department, Edison Electric Institute, 420 Lexington Avenue, New York 17, N. Y.

Three P's in a Pod

Good Policies, Procedures, and Personnel Spell Good Customer Relations

By J. Gordon Ross

Manager, Customer Service and Relations, Rochester Gas & Electric Corporation

An address before the National Conference of Electric and Gas Utility Accountants, Chicago, Ill., April 24, 1951

ON my arrival at home from the office one evening not long ago my good wife greeted me with "Well, who's the new lady friend?" In response to my inquiry, "Which one do you mean?" she said, "The one who sent the beautiful flowers in the living room." There was indeed a lovely vase of flowers with a card in an envelope addressed to me. The handwritten name on the card did not click with me, but upon the back of the envelope was the lady florist's name, which was the same as that on the card.

I then recalled that on the previous day I had received a telephone call from her. She had told me she was an electric customer of ours and was now installing a gas water heater. The gas service line was in the building, and she wanted to ask if it was necessary for her to come to our office to make application for a meter. I assured her it was not and that I would see to it that a meter was installed the following morning. Apparently it had been taken care of to her satisfaction, and she had sent me the flowers as a token of her appreciation.

Fulfilling an Obligation

Later in the evening as I enjoyed the presence of those flowers I became slightly uncomfortable because of the realization that I had actually done nothing to deserve them. I was sure that someone else involved in the service rendered would be a more worthy recipient. So I proceeded to visualize the steps that were followed to bring about the results. I had handed a pencil memo to a customer service representative, who had written an order and despatched it by tube to the credit history file. There it was checked with the customer's record for accuracy of name and address, and an entry was made on the record. It then went by tube to the Customer Service Department to go along with other orders to our service building. At that point the order was reproduced in the required number of copies and turned over to the gas despatcher. The latter assigned the order to a meter installer for completion the following morning. There was no unusual performance all along the line. Each one merely did what he was supposed to do and no one, including myself, was entitled to a bouquet for exceptional performance. We just fulfilled an obligation which we owed to our customer.

Vital Elements

I mention this experience because it involved the three elements most vital to favorable customer reaction—Policies, Procedures, and Personnel. From the policy angle, if the customer had been required to come to the office, she would have been inconvenienced and annoyed. If our Meter Department took several days to complete the work, she would have been disappointed. The procedure for handling the order insured its being in the despatcher's hands in time to assign it for completion the following morning. The personnel involved had done their jobs with accuracy and despatch, and the meter installer who visited the customer's premises had apparently conducted himself in such a manner as to merit the customer's approval. If any one of the persons involved had failed to do his job properly, or if the meter man had been careless, noisy, or discourteous, the customer's reaction would have been unfavorable.

Policies, Procedures, and Personnel have been referred to as "Three P's in a Pod." When properly coordinated, they make a package that spells customer satisfaction. Let's first talk about policies. Each of the three "P's" is vitally important, but particular emphasis must be placed on policies. Too much stress cannot be placed on the need for constant study and review of policies that affect relations with customers.

The first consideration must be, are they fair to the customer? Then, can they be explained understandably? Remember, policies are the working tools of your customer contact personnel. There are policies of all kinds affecting credit, billing, and operations. Nothing is more disheartening to a contact employee than to be in a position where he has to try to justify a policy he isn't sold on himself.

Those of us who have been active on committees in the AGA and EEI are familiar with the progress that our efforts and our contacts with each other have brought about in policy matters. It is general practice among us to accept service orders by phone, we have discontinued asking a lot of embarrassing questions of a new customer, and we ask for deposits only when an unfavorable record or an unusual risk is involved.

It does not necessarily follow that these policies on which many of us agree are universally accepted. Not too long ago a large company was represented for the first time on one of these committees, and I could hardly believe my ears when the new member announced that in order to avoid discrimination his company required a deposit from each and every customer.

Deposits and Billing

Most of us now agree that a customer, once established, can move from one location to another and his billing will be continuous. It is a quite generally accepted procedure that a deposit will be applied to a final bill and the balance refunded to a customer, rather than require payment of a final bill and refund the deposit only when and if a customer asks for it. Some companies will even estimate final use in order to refund a deposit when the customer wants it.

Customer-conscious companies which have a discount or penalty have applied common sense policies with respect to requiring their payment. Many companies recognize that nothing offends a good customer more than to demand payment of a penalty the first time he is late, perhaps in years. Some automatically accept a late payment at net once in a year, or even once in six months. Then there is the question of exactly when a payment is past due.

Policy Evolution

Let's follow the evolution of policies affecting this matter in the case of one company. The original policy, defined in the company's printed rules and regulations, required that a mailed remittance must be postmarked prior to midnight of the due date. Complaints were received from customers that their payments were in the mail boxes long before the deadline, but the mail was not picked up and postmarked in time. The company then changed its policy and would accept payments postmarked up to 1 p.m. of the day following the due date. This seemed to solve the problem, but another presented itself.

Customers who came into the office the morning following the due date were required to pay gross, or upon protesting, were told if they would run over to the post office and mail their remittance with a postmark before 1 p.m. it would be accepted at net. This ridiculous condition prompted another change in policy which permitted acceptance at net of any mailed payment bearing postmark of the date following the due date or any payment made at a company office the day after due date. Justification for this policy was found in the fact that payments made at agencies do not reach the company office until the following day.

Influencing Customer Reaction

The policies affecting receiving tellers influence customer reaction. A customer doesn't like to stand in line, but he particularly dislikes arriving at the teller's window only to be told he must go elsewhere for some purpose before his payment can be accepted.

One situation of this kind is when a customer asks to pay net after discount date. A simple solution is used by some companies whereby a symbol on the bill shows the teller that the customer has had previous allowance in the current year or six months' period, which the teller can explain. If no such symbol appears on the bill the teller knows that the customer is entitled to a late net payment. An on-account payment will be accepted by tellers in some offices, and even duplicate bills will be issued and payments accepted by all or special tellers to avoid sending customers elsewhere.

In some companies hard and fast rules are observed with respect to acceptance or cashing of checks when cash is to be returned to a customer. In one case this practice was approved if a customer paid a service bill, but the rule was not flexible enough to permit return of cash when a customer of record tendered a check in payment for merchandise.

An inconsistent and inconsiderate policy is one which requires that all cash must be paid to the receiving teller. A customer purchasing a 30-cent lamp must take his cash and slip to the teller and bring back a receipt. A more convenient plan would be to provide a cash register at the lamp sales counter.

Effects of Policy Changes

There are all kinds of policies. Some are dictated by management because of their general character. Others are instituted by department heads because of expediency, or are influenced by the changing conditions by which operations are affected. Every policy change, no matter how minor, should be scrutinized as to its effect on our relations with customers. If it requires that a customer be compelled to do more to get what he wants, or pay more for what he gets, we must be particularly careful in giving it our blessing from a customer relations angle.

The operating, accounting, and other departments involved are naturally confronted with the problems of costs of operation. The balance between costs and customer relations is delicate. It is obviously unwise from a customer relations angle to impose excessive charges for services at the risk of jeopardizing customer good will.

Many gas companies, particularly, have gained public favor by making without charge adjustments to customers' appliances to insure more efficient utilization of their service. Some feel that increased operating costs now justify charging for this service. This is a debatable question. Repair service may be charged for at reasonable rates, but some companies would rather discontinue repair services than to involve themselves in excessive charge controversies.

The second "P" I would like you to think about stands for Procedures. Procedures must be so designed as to give first consideration to the customers' requirements, but too often emphasis is placed on accounting controls. Actually, customers' orders need only to convey to the operating or other department what is wanted by whom, where, and when. If other information is needed for rate, accounting, or statistical purposes, it can be added after the customer has been taken care of.

"One Stop" Service

"One stop" service is an objective to be sought in telephone as well as personal contacts with our customers. Modern practice places customer service or order boards in service buildings, where orders are made promptly available to the operating departments. Customers need call only one number for any type of service or information. The days of calling the Gas Service Department for one thing, the Electric Service Department for another, and the Appliance Service Department for still a third thing, are gone.

At the office, "one stop" service with facilities for a customer's privacy and comfort are the order of the day. The main objective is to meet the customer's need, not to keep records of his call. In one company where voluminous reports were regularly required concerning each department's operations, the department head decided to see what would happen if he didn't send his in. It was never missed and he has not made them since.

In speaking about applications for service it has been mentioned that signatures are not so important a factor anymore. Some companies don't get them at all, but a lack of consistency exists when, upon purchase of an appliance, a customer is required to sign (1) a sales ticket, (2) a promissory note, (3) a chattel mortgage, and (4) a delivery receipt.

Duplicate Bills

Present-day accounting systems make it possible to provide a customer very quickly with a duplicate bill. Frequently they are now found at the customer service department or at the receiving teller's window. Regardless of the ac-

counting system, procedures should be established that will prevent unnecessary waiting for a duplicate bill.

Simplicity should dominate those procedures which have to do with service to our customers. A frequent review of procedures, always with the questions in mind, "Why do we do this?" and "Isn't there a better way?" will pay huge dividends.

The Third "P"

Now let's talk about the third "P"—Personnel. No matter how good our policies fundamentally, nor how carefully thought out our procedures, it takes the right personnel to use them to the best advantage. The employees who contact customers, whether by phone, in the office, or in the field, must be sold on your company. They must be happy in their jobs. Even those behind the scenes can influence customer relations. The billing clerk's error is just as annoying as the meter reader's brusqueness. Courtesy and a willingness to listen mean a great deal in contacting customers.

Operating department personnel must be aware of the problems of the contact groups and vice versa. It should be understood that a contact employee will not make a promise that cannot be met, and on the other hand, promises properly made must be kept. It serves no good purpose for one employee to condemn another employee or department before a customer. This just causes loss of the customer's respect for the organization. If another department or employee has failed, or does not meet standards of service desired, it should be taken up through the proper channels when the customer is not present.

Keep Personnel Posted

An effective personnel is an informed personnel. Failure to keep contact personnel posted on changed policies and procedures is like depriving a workman of the tools needed for the job he is doing. So frequently it happens that information of value doesn't get all the way down the line, particularly where district offices are involved. Regular meetings and key personnel mailing lists are used effectively in many companies to keep employees posted on all matters of information.

Personal contacts with customers are far more effective in adjusting delicate situations than are letters. Properly trained personnel with pleasing manners and appearance can be most effective in building good customer relations in this field.

Yes, good Policies, Procedures, and Personnel spell good customer relations, and consequently good public relations, because our customers are the public. But let us not discount the attitude of management in the picture. The manner in which the president and other executive officers handle their individual customer contacts is a factor of tremendous significance.

If your experience, like mine, has been that your president and other chief executives are just as courteous, considerate, and sincere in dealing with any customer, no matter what his status in life—if their doors are always open as an invitation to anyone to enter—if they answer their own telephones without someone demanding to know who is calling and why, then you have the type of encouragement that will inspire all your employees to give your customers the attention they deserve. Contrast this condition with that which must exist in a company whose customer relations man recently told me that there had been a change of management in his company and customer relations has been relegated to a back seat.

Creating Good Customer Relations

Wise management realizes that good customer relations are the result of unceasing effort. It is not possible to change the attitude of your customers overnight from an unfavorable to a favorable light. Not long ago I received a long distance call from a friend who is himself a very capable fellow, and his utility company is well regarded in the industry. He informed me that his company was confronted with a delicate situation and would probably be subjected to a hearing on rates. He said he realized that they had fallen short in their customer relations effort and needed to improve their methods for handling customer contacts and their personnel training.

I could not help but feel that this was a case of "too little and too late." It just isn't in the cards to defer efforts to create favorable customer reaction until a time when they are specifically needed. In contrast to this situation I know of cases where a company's reputation for good service and courteous and fair dealing have forestalled such situations.

The experience just cited is not unlike that of another progressive company whose capable representative outlined in a letter to me a list of nine policy changes which he obviously felt would improve his company's customer relations, and which he stated were under study but not as yet approved. This situation is found to exist all too frequently and is no doubt caused by the unwillingness of many of us to drive hard enough to bring about the desired changes. This may be the result of having been discouraged in similar previous efforts.

Suggestion Systems

Many of our companies have suggestion systems, and each suggestion submitted by an employee is carefully analyzed. If approved it is adopted, and the employee is given an award. Surely the ideas of supervisory employees are worthy of similar attention. Perhaps there is need in some companies for a procedure whereby recommended improvements in policy and procedure which affect customer relations can be referred by supervisory employees to a committee where they will receive attention at least equal to that accorded other employee suggestions.

Not only must there be the will to serve, but there must be an effective method of training employees to do a real job in the field of customer contacts. A contribution of great value to the latter effort is now being made through the long-range project of your Customer Relations Sub-Committees. Every known training program, film, or booklet is being reviewed, and in the not-too-distant future there will be presented a training course embracing every proved method and procedure. Because of my knowledge of the capable, conscientious, and untiring efforts being put into this undertaking, I predict that it will be one of the most useful and valuable contributions of its kind ever made.

Never Relax Efforts

There is never a time when you can relax in your efforts to serve your customers well. Not even when a customer tells you how well he likes you can you be sure his attitude won't change.

Let me give you an example. Last May a customer sent his check with a note saying, "Your bill is one of the few bills nowadays I pay with satisfaction for

value received, in the way of economical, efficient service." In December he wrote, "Your demand for 91 cents because through many difficulties my bill was overdue has turned me into an implacable enemy. I will not soon forget this 'insult.' Your public relations program slipped up badly. There is no need to answer this communication because I will not read the reply." The unfortunate part was that the notice referred to was sent to him in error. It was possible to contact him and restore his good will.

A most gratifying experience occurred recently when I called on a county official to solicit his aid in making certain information available through the town offices which would help home builders and at the same time be helpful to us. The official was most cordial and cooperative and would do everything we asked. He did say, however, "You know, your company has a heart. I've dealt with public utilities at . . . and . . . and they always took a demanding position which I resented. Frankly, I think in this case you would be justified in demanding that the builders do what you want, but I'll go along and try to help you accomplish the result the other way."

His remarks did impress on me the fact that utilities are judged not only by local performance, but by customers' experiences with utilities elsewhere. Also, as his contacts were largely with utility right-of-way men and construction men, it shows that their contacts, too, have a decided effect on customer relations.

The rapidly growing loads, both gas and electric, have produced operations of unusual magnitude in these times. New plants are being constructed and facilities expanded. Many of you have experienced such major undertakings as conversion from manufactured to natural gas.

Last summer my company handled such a conversion in part of our area with the aid of an outside organization of national reputation. Our employees were informed through meetings, the house organ, and other means as to the problems to be expected and the plans for handling them. The outside organization's personnel were briefed by our management as to our customer relations policies and what we expected of them. Particular attention was given to the content and make-up of notices that would be sent to those customers who would be affected and to newspaper publicity.

When the job was completed, each customer was sent a letter thanking him for his forbearance and cooperation and urging him to tell us of anything not done to his satisfaction. We had our troubles, of course, but our persistence in correcting conditions where needed has produced gratifying results.

In conclusion, let us review the reasons why we should devote so much time and effort to achieve good customer relations.

First, operating with exclusive rights in our respective areas, we have an obligation not only to supply these communities with our services, but to do so in a manner that will merit the approval of those we serve.

Second, it is just good common sense and good business to expect that a more satisfactory service will create a demand resulting in greater sales.

Third, we, as employees of these essential industries, can each get a greater feeling of pride and satisfaction in our jobs when we know that our companies are well regarded by our customers because a genuine effort is being made to serve them well, and we are not placed in the embarrassing position of being required to apologize for our shortcomings.

And finally, there is a direct relationship between our customer relations and the survival of the free enterprise system. Socialism is much more likely to thrive where free enterprise and private initiative have failed to do the job well. The position of the public utility industry is not unlike the Irishman who, when in his last moments, was asked by the priest if he had accepted the Lord and renounced the devil replied, "I have accepted the Lord, Father, but I'm in no position to antagonize anyone."

Regional Stockholders Meetings Called "Industrial Democracy at Its Best"

MORE than 4,400 Consumers Power Company stockholders attended the company's series of ten regional stockholders meetings held in ten cities in the company's service area during the second two weeks of April.

Members of the executive staff appeared at the meetings to give brief talks on the company's natural gas and electric operations growth during 1950, and the company's current $48,000,000 construction program was reviewed. Consumers' new sound and color movie, "Meet Outstate Michigan," was shown, and numerous requests for its appearance at service club, school, and church assemblies have been received.

Meetings were conducted in Royal Oak and Jackson by President Justin R. Whiting; in Lansing, Muskegon, Grand Rapids, and Saginaw by Vice President James H. Campbell; in Kalamazoo and Battle Creek by financial Vice President Robert Briggs; and in Bay City and Flint by First Vice President Dan E. Karn.

The largest meeting, at Grand Rapids, attracted 1,040. Average attendance for all meetings exceeded 400 persons, plus company committee members and supervisory personnel. Many employees who are stockholders in their company also attended.

Representatives of the press attended many of the programs. After the Muskegon meeting the *Muskegon Chronicle* commented that the series was "A progressive idea. . . healthy for company and shareowners alike."

In the *Battle Creek Enquirer and News*, Business Editor Bob Kilworth caught the spirit of the occasion in the lead of his story: "Some 400 stockholders filled all the chairs in the ballroom, stood along the walls, sat on service tables and listened from the hallway outside as Robert P. Briggs, Consumers' vice president, reviewed the Company's operations and took a look ahead."

The *Kalamazoo Gazette* quoted a stockholder's remark: "This is industrial democracy at its best."

The question and answer periods, which concluded the formal aspects of the programs, were quite successful, with stockholders asking questions ranging in subject matter from stock and bond transactions to good fishing at company dam sites. Refreshments were served following the question periods, and officials and stockholders talked about business over coffee and sandwiches.

The regional meeting idea was inaugurated at Consumers by President Whiting in 1949, when four meetings were held. In 1950 the number was increased to seven and in 1951 to ten.

Man-Hours for Essential Production

By Robert G. Ely

Director of Sales, The Connecticut Light and Power Co.

An address before the 17th Annual EEI Sales Conference, Chicago, Ill., April 3, 1951

THE shortage of manpower in the economy which we are entering prompted the selection of Man-Hours for Essential Production as the theme of this address.

The needs of the armed services, the heavy demands for manpower to operate a completely controlled economy, and the increased manpower requirements for war production are draining the available supply. Such little unemployment as we have had is rapidly disappearing, and marginal workers are again on the job.

Accelerated Hiring

Some indication of this trend was given in the Department of Labor release of March 11 which stated that the hiring rate rose from 30 per thousand employees in manufacturing plants in December, to 51 per thousand employees in January of this year, the highest point for that month since 1947. This release stated that, in part, this reflected accelerated hiring in the metals and metal products industry where increased defense activity is being superimposed on continued high production of civilian goods. There is little doubt but that the impact of this trend will become much more severe.

Total defense expenditures in January amounted to only $54,150,000 per day as compared with $260,000,000 per day, the highest level reached during 1944. With the depreciation of the dollar which has been experienced since 1944, it is apparent that defense production is running now only about 10 per cent of that war year.

Percentage of Defense Work

This fact can be checked another way. After careful analysis, the Edison Electric Institute has estimated that each dollar of defense contracts let will require the use of one kilowatthour by industry to produce the end products. On this basis the $879,000,000 in contract payments in January indicated that defense work amounted to only 5 per cent of industrial production.

These figures indicate two things. First, that manpower may be in very short supply, and second, that this shortage may become much more acute because we are in the very early stages of production for defense.

Industry must therefore turn to more automatic and more completely electrified processes to ease this shortage. The trend, which has been in this direction for years, must be accelerated.

The very important job that we have been doing in industrial power sales—that of helping industry substitute kilowatthours for man-hours to reduce production costs—has taken on added significance, an urgency, in fact, if there is to be sufficient manpower for industry to meet its production goals.

An indication of the tremendous increase in manpower made available by reason of plant mechanization and electrification may be obtained from a study of the Federal Reserve Board Index of Industrial Production and the man-hours worked in industry during the years of 1941 and 1950.

Electrification Supplants Manpower

In 1941, with an F.R.B. index of 168 and total man-hours in industry of 22.8 billion, 135.9 million man-hours were required per point of F.R.B. index. With the 1950 index of 209, it would be expected that 28.4 billion man-hours would have been required. Actually, however, there were only 25.4 billion or a net reduction of 3.0 billion man-hours. At the average hours worked in 1950 of 2,073, this means a net saving by industrial electrification of 1,447,000 men.

A specific example of the steps being taken is found in the U. S. Steel Corporation's announcement that 2.44 men will be required to produce 1,000 tons of steel annually at the new Fairless works. This figure compares with a U. S. average as shown in the 1947 Census of Manufacturers of 5.64 men. Comparative figures on kilowatthours per manhour in this instance are not available, but it is obvious that the increase would be sizable.

For industry as a whole, the 1941 figure of 4.27 kilowatthours per manhour rose to 6.29 kilowatthours per manhour in 1950, and it is going to be necessary to increase this figure materially in the period ahead.

To help industry do this job we must place more emphasis on plant electrification, on the application of power to new methods, on using electric heat right in the production line and for accurate heating in process, on increased speeds and diverse operations for machine tools, and on improved industrial lighting to speed production with fewer rejects and to provide safety and plant protection. This is the power sales job for the coming year, and these are some of the specific activities.

Tools and Cooperation

There are three subjects closely allied to this power sales job that I should like to report on to you for the members of the Industrial Power and Heating Section:

1. Tools to do the job we have ahead.
2. Cooperation with the Office of Small Business, National Production Authority.
3. Cooperation between electrical equipment manufacturers and electric utility companies.

So far during the committee year, your Industrial Power and Heating Section has made available two revised sections of the Power Sales Manual: Industrial Refrigeration and Industrial Development.

These sections were studied very carefully, completely revised, and brought up to date in accordance with modern operating practices. A revision of the Section on Adequate Wiring should be available shortly.

Steam Competition Supplement

In addition, a brand new supplement to the Section on Steam Competition has been released. This supplement covers the many phases of power plant operations and economics to which consideration should be given in any competitive steam job. It has been written

in such a fashion that it can serve as a guide for true cost comparisons by plant engineers and consulting firms. Read it with this thought in mind, for you may want to distribute copies to some of your prospects and, shall I say, wavering customers.

Ready for the printer is, also, a revision of publication G.4 on Electric Metal and Alloy Melting, which will now be incorporated in the Manual. Much information in this section is new, together with a tabulation of the large electric steel furnace installations throughout the country.

New Section

Also in the process of preparation is a new section of the Manual on the Application of Resistance Type Heating, which will be very helpful. An addendum to the Infrared Section on Metallic Type Infrared Heating is also being prepared.

During the year, four releases on new applications of electric power in industry and new equipment have been sent out. These releases give in an informal way the latest developments and provide a medium for the exchange of much useful information.

These are some of the tools which have been made available to your power sales organizations during the last few months. Let's put them to use in doing a better job for our customers.

Assistance to Smaller Customers

The second subject is that of assistance to our smaller customers and cooperation with the National Production Authority's Office of Small Business.

Gradual reduction in allowable uses of critical materials is creating serious business problems for many of the smaller industries in the country. Without defense orders many of our customers that might otherwise grow to be important factors in the economic life of our communities may fail. Some of these small companies know how to take care of themselves and are already working on prime contracts or sub-contracts. Others are less aggressive and in need of help.

During the past war the Smaller War Plants Corporation made a comprehensive survey of machine tool and manufacturing facilities of thousands of these firms and the information proved to be of little value.

Endeavoring to profit by that experience, a representative of the Office of Small Business has discussed the possibility of cooperation with power salesmen all over the country to see if more work could not be channeled to small industry.

The National Production Authority has approximately 80 offices and will have approximately 100 in all the larger cities of the country. These offices will tie in closely with similarly located procurement offices to provide information on the contracts open for bidding.

The Industrial Power and Heating Section, through Maxwell Cole, Howard Purdy and Glenn Young, is working closely with the Office of Small Business, which has been assured the cooperation of power salesmen all over the country in helping small industry to obtain defense orders. You will hear more of this during the next few months.

Electric Heating Promotion

The third subject is that of cooperation of the electric utility companies and the electrical equipment manufacturers in a program for educational and broad promotional work in the field of electric heating.

Last year I advanced the thought that there could be better coordination within the industry in the electric heating field. The Industrial Power and Heating Section has had meetings with several electrical equipment manufacturers over the last twelve months. Evolving from these discussions and in the very early stages of formation, is the new Industrial Electrification Council, which will have as its purpose:

To foster and coordinate the dissemination to American industry of factual information on the application of electricity and electrical apparatus to industrial processes and other manufacturing operations for the purpose of developing a wider knowledge by American industry as a whole of the opportunities to increase production, improve quality, and reduce costs through the widest economic use of electricity.

Council Purposes

Amplifying the purpose of the council, we hope to:

1. Gain appreciation by American industry that only through the widest possible electrification of plant and process will the goal of increased production of better products at lower cost be attained.
2. Accelerate the acceptance of economic electric power applications to increase further the contribution which the electric power industry has already made to industrial processing and plant operation.
3. Develop educational programs founded on accepted electric power applications to assure the widest economic use of those power applications by industry as a whole.
4. Develop training programs in industrial electrification for personnel of industry, manufacturers, and utility companies.

Stamp of Approval

At a recent meeting the Commercial Division General Committee gave its approval to the formation of this Council. For the utility companies, final approval is still necessary by the Board of Directors of the Edison Electric Institute. The electrical equipment manufacturers who have worked for the formation of the Council have all given it their stamp of approval.

Although organized to cover ultimately the entire field of industrial electrification, the Council in its initial stages will devote its activities solely to the field of electric heating, where it is felt that there is much work to be done.

Summary

To summarize, I have tried to point out that in the months ahead there will be an increasing shortage of manpower; that this shortage may be relieved measurably by the substitution of kilowatt-hours for man-hours; that power salesmen have no need to change their basic policy of helping customers improve production methods, but merely to intensify their activities; that many new and useful tools have been provided to do this work; that assistance to small industry will help our customers use their manpower efficiently by maintaining production levels through defense orders and sub-contracts; and that the industry, utility companies, and manufacturers are beginning to work together in an effort to improve their educational and broad promotional work in the field of electric heating so that industry may use this production tool more effectively.

All of these factors contribute to the conservation of manpower. We have a big job that we can do in making more man-hours available for essential production.

Industry and the Defense Effort

By William V. O'Brien

Commercial Vice President, General Electric Co.

An address before the 17th Annual EEI Sales Conference, Chicago, Ill., April 4, 1951

ANYTHING can happen in America. Most of us have grown to some kind of maturity in business believing in the truth of that statement, particularly in the endlessly changing and forever exciting business of electric power.

Perhaps we should make at least one exception, however, and that exception would be this—we shall probably never experience a time of no change. We shall probably never sit as a friendly and interested member of this audience and hear a speaker preface his remarks by saying, "This was a normal year, and we expect no changes in the immediate future."

Never a Normal year

The electrical industry has never had a normal year. It cut its teeth on disappointments and crises. Things are forever challenging our ingenuity, our statistics, our reserves of manpower and dollars, our reserves of patience and patriotism, and our courage. We are most thankful that last year was not "normal," whatever that may be, because it was a year of substantial achievement for the business commonwealth, a time of record-breaking production and selling, when in the face of inflation and devalued dollars and political and economic troubles more people in the United States got more and better goods and services for less cost than ever before in their lives.

That achievement was due in great part to the efforts of the men and women of the electrical industry, in all of its branches and ramifications. This is not a self-serving boast, in my belief, but a matter of sober fact. It is the platform on which we meet each other here, and look forward to another year which, we can be assured, will be anything but "normal."

In previous critical times for the nation, when war was either in the offing or had actually begun, things became very specifically uncomfortable for the people who make their living selling goods and services. Even today, all-out war would mean severe dislocations and rearrangements of our industrial economy, roughly similar to those experienced in 1940, 1941, and the years following. It does not take long for salesmen with nothing to sell to be converted into soldiers, expediters, or some other form of intermediate life in an industrial nation at war.

Wartime Role

It has been the peculiar fortune of the electrical industry to have a role to play in wartime that is every bit as big, usually bigger, and even more important than in peacetime. The changing nature of war and the weapons with which it is fought have enhanced the value of electrical manufacturing, with its segments of research, development, and engineering, just as it has made the business of generating and distributing electric power of overwhelming importance.

In an age when the telling and deciding blows are struck by production lines, electric power was mobilized right along with the Marines. But this precious commodity did not need to be sold. It did not need to be promoted. In fact, the supply was rationed, just as the manufacturing resources of our industry were converted and rationed. This left very little opportunity for the salesman to exercise the talents which he possessed. There was only one customer, and there was nothing to sell.

Different Set of Circumstances

This time we are faced with a different kind of emergency and a totally different set of circumstances. Our danger, as a country, is perhaps greater than at any previous time. The outcome is in even greater doubt than it was a decade ago, and the stakes are greater than last time. There will be the same demands upon our manpower, our resources, and our skill. To be specific, we are already aware that we are in grave difficulties as an industry, and that electric power will be an even more vital factor than it was in World War II.

But there is one thing which is brand new, one factor which never before existed. Today we are not only preparing to defend ourselves, in combat if necessary, but we are also preparing to demonstrate to our potential opponents that global warfare would be for them a foolish and fatal decision. At the same time, we are not being asked to jettison our peacetime economy and forego our normal pursuits. We are being asked for intelligent sacrifices, intelligent planning, intelligent discipline. "We do not seek," declares Mr. Wilson, "an economy of scarcity." And then he has continued to point out that this is a unique kind of emergency in which we find ourselves, one in which our first and paramount duty is to build up our defenses and our weapons to a point where it would be foolhardy for an enemy to strike us, and to a point where our friends in Europe and Asia will be encouraged to take a similar strong stand against aggression.

Improve Peacetime Muscles

Along with this, we are urged to maintain and improve so far as possible our peacetime muscles and to augment our economic strength and leadership. The aim of the national mobilization program is, first, to make ourselves secure, and then to make ourselves strong economically, to maintain our high standard of living, to keep the way of life and the freedoms that we as a free people have earned and enjoyed.

In other countries which are the potential sources of aggression the building of mighty armament, the production of the tools of aggression, means complete sacrifice, the loss of those things which the individual in that state may want or even need to make his life comfortable and worth living.

This expansion of production is something that we can get our teeth into as commercial people, something that we understand and can do better than anybody else, while still serving our

country in a time of great emergency. We do not need to run for cover, because there is a tremendous job to be done by everybody in industry. In our industry—the electric power industry—that job is to make electric power go farther and serve better—our traditional task down through the years of our association.

True, if all-out war comes, we must abandon at least temporarily many, even most of our comforts, in order that our tremendous productive capacity can surpass by a wide margin the ability of the aggressor to produce materials of war and the goods necessary to keep a fighting force in the field.

Step Up Production in All Basic Areas

But at the present time our planning, as I understand it, is to step up production in all basic areas so that we can provide the weapons and goods for defense, as well as providing the goods so necessary for peacetime living as we know it.

But we must look ahead further than next year or the year after. We are free people and must take as a premise that once we have armed and provided ample support for our military force, we will continue our industrial expansion.

You, in the business of providing electric power, evidently are as optimistic as I am, because your total installed generation in 1949 was 63.1 million kilowatts, and by the end of 1952 it will probably be in the neighborhood of 83.3 million kilowatts. This latter figure does not include approximately a million kilowatts of generating equipment that will be installed for atomic energy requirements.

Greater Capacity

This is far above the capacity you had in place to produce the victory of World War II. Granted that the demands of a possible World War III will be even greater than our last war, your plans in the utility industry can satisfactorily take care of these incremental power requirements.

But let's take an optimistic view of the future. Suppose that our arming and increased national production are sufficient evidence to a potential aggressor that he can't win—that to start an all-out war would be futile. Then we are going to have power to sell before too long. The increase in population from 149.2 millions in 1949 to an expected 156.2 million people in 1952 will automatically create a market for you, but there will still be a selling job to do.

Looking ahead to this selling job, now is the time to create and maintain good customer relations. Never has a salesman had a greater opportunity to better his customer relations. In our rapidly expanding production many of your customers are badly in need of the expert specialized help you can give them.

Mr. MacCalla of the West Penn Power Company, in a recent issue of *Electrical World* gave a very thorough discussion of nine ways in which the industrial sales group may help. But let's not confine our thinking to industrial power. Any expansion of industrial production brings an attendant expansion in the areas of rural, domestic, and commercial power. Remember, we are striving to build our over-all economy and we have a tremendous population growth to serve.

Customer Relations

So whatever your sales responsibilities may be, you have an opportunity really to do a job in customer relations. You who are in sales are usually the principal contact in your company with the user of electric power. During this early period of rapid production expansion, there are bound to be many instances where every need for power—whether industrial, commercial, rural, or domestic—cannot be met in the time the user or prospective user thinks necessary. Your industry, and perhaps your own company, will be the recipient of a lot of criticism. This criticism will probably be channeled so that it will be critical of private power and of free enterprise.

I saw a statement recently that I cannot properly credit, but it has real meaning, a real implication for us. The statement made by a business man is this: "Now—business, if it's almost right is wrong." There is a lot of truth in that. And if we cannot quite meet all our demands, we will be judged as wrong and incompetent. That is where you get into the field of public relations. Don't deal in generalities. You, who know or can learn the facts about your industry and company operations and performance, should shout these facts from the housetops in your communities and operating areas, because you are an important part of your industry's and company's public relations.

Please understand that I in no way want to detract from the achievements of your public relations department and the job they are doing. Your entire industry is acutely conscious of the needs and greater understanding of the utilities' function and economy, but no matter what is done there is always the need for the personal presentation of this kind of a story.

Insure Effective Use

The estimated total gross national product in 1952 is $320 billions, which, if we deduct total government purchases, drops to $221 billions. Compare this with a total gross national product of $255.6 billions in 1949, or a figure of $212.3 billions in the same year after government expenditures were subtracted. With an expected increase in business activity higher than 1949, we will not require many sales programs in the near future. However, you do have the responsibility of seeing that the available electric power is effectively and efficiently used.

Dr. Whitney, the first director of our General Electric Research Laboratory, once said that anything we are doing today the same way we were doing it five years ago probably needs looking into, and anything we are doing today the same way we were doing it ten years ago probably is wrong. This statement effectively points out the necessity, particularly for the power sales group, of getting actively into the electric users' plants to see what changes are indicated or necessary in the way of electric power being used or not being used to make the maximum contribution to our productive effort.

It is not necessary for me to detail any plan of action in the field of effective and efficient utilization of electric power and I am sure you, the salesmen, if you approach the problem, can quickly find things that should be done.

Role of Sales People

There are some great objectives that should be common to all of us—specifically, that we exert ourselves to preserve national unity, and that we face up to the extremely difficult battle against inflation, which is today probably our greatest enemy. You are every bit as aware of these issues as I am,

and it is not my purpose or assignment to discuss them further. What I should like to do is touch briefly on the role of business people, and particularly of sales people, in building economic musclepower, and then to give a few examples to indicate how the electrical industry continues to go about this job. Most of the examples are necessarily taken from the activities of my own company, because I am more familiar with them, but they rub shoulders with similar activities and achievements of other organizations which, taken together, make up the arresting story of the industry of which we are all a part.

You will find nothing especially new in these observations. They concern developments and machines and engineering applications and improvements in our efficiency and productivity which are fairly familiar to us. But I think that their very familiarity betrays us into not evaluating them properly.

Here are two things from our own company annual report that caught my eye: our productive facilities at the close of last year, which amounted to some 117 plants and 53½ million square feet of floor space, if used at maximum capacity on a full three-hour shift basis of operation, assuming the availability of materials and manpower, might reasonably be expected to provide for a physical output at least 50 per cent greater than has yet been attained. The second fact is this—the net value at which our plant and equipment were carried at the close of the year was less than the amount we spent for new facilities during the last four years.

Make Electric Power Go Farther

Consider these things, if you will, not just as items in the report of a single company in this industry, but as operating characteristics of the American industrial economy, and I believe you can understand why Russia fears the peacetime strength of the United States more than all of its armaments existing at any one time. You can understand why the worst thing that could happen to us would be any breakdown of this machine from within, rather than attack from the outside. You can understand, I believe, why it is important for us to put our back into the task of making electric power go farther than ever.

Here is the framework on which most of the effort of this industry is based: in 1900 the average American workman used an estimated one-tenth of a kilowatthour of electricity per man-hour. At the end of the last war, this had risen to five kilowatthours per man-hour, and the objective set by many of us was to increase this to six kilowatthours by 1950. Actually, at the end of 1950, it is estimated that the national average had risen to 6.75 kilowatthours per man-hour. By thus adding to the capacity of the individual worker to produce, it is estimated that all industry has been able to add the equivalent of one and a half million production workers over our wartime peak years of 1943 and 1944.

Specific Achievements

These are real statistics, and impressive ones, but what are some of the specific individual achievements and developments that are contributing to this over-all effort? Again, the ones I cite are ones I know about from our own experience, but I believe you can accept them as indices of the contributions of the entire industry. Here are a few:

The average large turbine we produced in 1950 had a capacity of 52,000 kilowatts, compared with 35,500 kilowatts three years before. And typical steam power stations installed in 1950 produced twice as much power per pound of coal as was the case 25 years ago. For the first time we have had gas turbines in real volume production, with more than 30 under construction, and as another phase of this, we are now building ten gas turbine locomotives for fast freight service, after a period of experimentation and testing.

Out at the Rosebud mine in Colstrip, Montana, the world's largest coal-loading shovel, powered by motors and generators totaling 2000 horsepower, has a capacity of 25 tons a minute. With a 17 cubic yard dipper and an 85-foot boom, it will load a standard 75-ton coal car with only five passes, at 35 seconds per pass.

Remote Control System

For the petroleum industry, a remote-control system for a pipeline enables a dispatcher in New York to spin a telephone dial and operate automatic pumping stations a thousand miles distant.

The glass-making industry is turning to packaged equipment incorporating large air-cooled transformers and saturable reactors for use in melting better grades of glass for television tubes and high-luster tableware.

A farmers' exchange in Buffalo is saving an estimated million dollars annually in lower feed costs by applying dielectric heating to sanitize feed bags, eliminating disease and infection before refilling.

There are a score of developments and applications bearing on the important expansion program in the steel industry, where orders for rolling mill drives have exceeded all previous records, including World War II. These range from a new detector which tags and separates unwanted tramp metal from low-grade ore flowing on a conveyor belt, to the highest-powered four-stand tandem mill ever built.

In other times a man or group went to war by picking up a club or a stone or a sword or gun, by putting on armor or a uniform or mounting a horse. But the weapons became more complex, the armies became larger, and the strong points were better defended. Little by little the preparations for war began to require more time, the efforts of more men behind the lines to make weapons, and of other men to keep them working.

Mechanization Takes Time

The mechanization of the first World War seemed a fearsome thing until the second World War came along. That was only yesterday, and official peace has not even been declared, but already the devices and machines that overwhelmed the Axis have taken on an air of antiques. We know, without any argument, that modern war cannot be fought without vast resources of raw materials, tremendous production facilities, astronomical sums of money and the finest brains of science and technology. The one with the best supply of these things stands to win. But mines and factories and laboratories and financial structures cannot be taken out of the closet in the armory the day before the battle. They cannot be brought into being one or two or three years before the battle. They have to exist, in a liquid and dynamic state of growth and progress and constant change, all of the time—most important of all, in peacetime. This we know, in the United States, because we have practically written the book.

The arguments that have been waged, by people who had nothing better to do, over the relative importance of the scientist, the engineer, the manufacturing man, and the salesman—to name just a few of the cogs in our machines—are pointless. Everyone has his part to play in building a peacetime economy. The

only reason I bring it up here at all is that in wartime there is seldom any argument over the importance of the scientist, the engineer, and the manufacturing man—but even commercial people are inclined to give the salesman the brushoff or silent treatment.

They assume he would look pretty good in uniform. But you can paste this in your book: no man has contributed more to the magnificent productive machine of which we are so proud, behind which we have marched steadily to world economic leadership and responsibility, than the salesman—the salesman of automobiles and typewriters and furniture and breakfast food and insurance and two-pants suits; the salesman whom we here acknowledge with special pride, of electric power to light homes and streets, to turn wheels and pump water and roll steel. Many of you know publisher Red Motley, who has a saying, certain to win him immortality among the peddlers, that "Nothing happens until somebody sells something."

To be ready to fight when attacked, all through the twentieth century, has meant to have the necessary industrial facilities in being. Never was that more true than today. To have them in being, to have the plants and tools and processes and brains on tap, has meant having them during the peaceful years, not just during a crisis. That is why the salesman has always been a valiant defender of his country.

Because of the salesman, whether or not in the electrical industry, people have bought goods and established for themselves a standard of living that has called for a continually expanding economy and productive capacity in this country. It is because of the production capacity now in place that we can go on to build for even greater output and provide the tools and goods necessary for war. The salesman has a direct role in our mobilization as he goes about building up and modernizing our productive facilities. He has an indirect role by raising our general living and working standards; by encouraging commerce and business at a profit on all levels; and by making us a country able to create firepower when it is needed in a crisis.

You in the electric power industry who are concerned with sales have a big responsibility—greater than before. But with that responsibility comes an opportunity—an opportunity to serve your country and your customers. First you must bend every effort to the task of seeing that electric power is used so as to produce the maximum number of finished products. You have an unprecedented opportunity to build and maintain good customer relations. I shall not attempt to tell you how to do this. It would be like carrying coals to Newcastle. The main thing is that you recognize the possibility and approach the problem in your own way.

In addition to customer relations activities you can, if you try, represent your industry and your company in the field of public relations. Here you will also be serving the cause of free enterprise.

There is quite a bit of material available in the public relations field to educate the unknowing as to the real meaning of free enterprise. The Middlewest Services here in Chicago have an excellent presentation; also, you may have seen the course which Dupont has used. In our own company we have used HOBSO, which are merely the first

(*Continued on page* 156)

Farm Electrification Week To Be Celebrated in August

PLANS for the celebration this year of the near-completion of the electrification of America's farms have been announced by Grover C. Neff, chairman of the committee supervising celebrations which will be held throughout the country and president, Wisconsin Power and Light Co.

"Increased farm production in this time of emergency is one of the 'secret weapons' of defense," Mr. Neff noted. "With electric power available to fill some of the gaps of a manpower shortage, farm production and efficiency will be increased. At a time when all our machinery is in high gear for defense, it is rewarding to know that the farmer has the electrical tools to turn out the basic necessities for the nation," he added.

Mr. Neff engaged in the early experiments of bringing electric power to the farmer in the 1920's.

The first experimental farm line was strung in 1923 near Red Wing, Minn., by Northern States Power Co., cooperating with the Farm Bureau Federation and the University of Minnesota. It was a six-mile, iron wire that connected 18 farms. The *St. Paul Farmer* at that time said "The eyes of the nation are to be turned upon Dodge County, Minn., as the scene of one of the most novel experiments ever conducted in behalf of agriculture in this country."

The farm electrification celebrations will be sponsored by the companies in the Public Information Program, headed by J. W. Parker, president, The Detroit Edison Co. The Edison Electric Institute will support the plan and civic and farm leaders will take part in programs which will be staged by the companies.

The week of August 26 has been set aside as Rural Electrification Week, when special activities are planned by the utilities to mark the progress that has been made in bringing electric power to the farms since 1923.

Electricity will then be available to about 4,900,000 of approximately 5,200,000 occupied farms, and to about 15,000,000 of 15,500,000 occupied rural dwellings. The business-managed utility companies serve 47 per cent of the farms, REA cooperatives serve 49 per cent, and municipal and other government systems serve four per cent.

About 80 per cent of the power used by farmers is supplied by tax-paying companies. These companies serve 60 per cent of the farms directly, and also provide at wholesale rates one-half of the power distributed by cooperatives. "The companies provide the power to the cooperatives at a cheaper rate on the average than the cooperatives themselves can supply it," Mr. Neff said.

Members of the committee for the observance celebrations, besides Mr. Neff, are E. R. Acker, Central Hudson Gas and Electric Corp.; W. J. Amoss, New Orleans Public Service, Inc.; Charles P. Crane, Consolidated Gas Electric Light and Power Co. of Baltimore; George M. Gadsby, Utah Power and Light Co.; N. B. Gussett, Iowa Power and Light Co.; R. H. Knowlton, The Connecticut Light and Power Co.; J. E. Loiseau, Public Service Co. of Colorado; P. H. Powers, West Penn Power Co.; Kinsey M. Robinson, The Washington Water Power Co.; Walter H. Sammis, Ohio Public Service; A. C. Spurr, Monongahela Power Co.; J. B. Thomas, Texas Electric Service Co.; R. A. Zachary, Public Service Electric and Gas Co.

Trends in Utility Accident Prevention Throughout the United States

By W. T. Rogers
Safety Consultant, Ebasco Services Incorporated
Chairman, EEI Accident Prevention Committee

An address before the Public Utilities Section, Southern Safety Conference, Birmingham, Ala., March 5, 1951

THE trends I am going to talk about today are not statistical trends, because you are all familiar with the accident statistics of the utility industry. For example, you know that in the telephone industry the trend has been downward since 1922, except for a period from 1933 to 1941 when the trend was rather stationary, following which period the downward trend was resumed. On the other hand, in the electric and gas industries, following a great reduction in accident frequency and severity in the early years of accident prevention effort from 1925 to 1940, the rates have been practically stationary. In fact, since 1940 the rates have been upward. However, there has been a slight improvement shown in the electric industry over the last two years.

Poor Accident Experience

The point is that both the electric and gas industries have had a very poor accident experience compared with industry in general, as may be seen from the charts issued by the National Safety Council. What are we doing to improve the accident situation in the electric and gas industries? To my mind there are five significant trends which, if followed, will bring about the desired improvement. These trends are:

1. A growing recognition on the part of management of the importance and value of safety work.
2. A tendency to put the safety job where it belongs—on the line organization.
3. Recognition by engineers, designers, and operating executives of the importance of safety and the realization that they can do something about the hazards in the industry.
4. Increasing attention to job analysis, job standards, and work methods as a means of reducing accidents.
5. Recognition of the importance of selection, training, and supervision in accident prevention.

These are the trends of thought and action in those companies which are progressing in accident prevention. However, these companies are too few in the utility industry. Although there are companies in the electric and gas industries that have been doing outstanding jobs of safety for many years, that have records which compare favorably with the Bell System's experience, the big problem, to my mind, is how to get other companies to do the same.

The general situation is discouraging. There are some companies that spend practically nothing on safety. They treat the safety director's job as a subordinate position. They spend a great deal of money on legal fees, sales, publicity, and other matters but practically nothing on organized safety work. They are "too busy" with other matters to pay much attention to safety.

Some Progress Evident

Some progress is being made, however. The Accident Prevention Committee of the Edison Electric Institute recently prepared a report on the activities of the committee over the last decade. This report included suggestions for future activity, and in that report it was proposed that the executives of the electric light and power industry take a greater interest in and participate more actively in safety work in their respective companies. We pointed out that we, as a committee, know how to prevent accidents, that quite a number of companies in the industry are preventing accidents, and that it is up to the other companies in the industry to do likewise.

In the American Gas Association there is an encouraging trend toward greater interest by executives of the gas industry in accident prevention matters, and several programs are now being launched which should bear fruit in the not too distant future.

It is a job for all of us to keep at everlastingly—to interest top executives in accident prevention. If a company does not know how to go about establishing safety work in the company, it would do well to employ outside consultants to make a survey and help set up a program. Even those companies with good records could very well profit from a periodic safety audit by an outside concern of safety specialists.

Examination of Trends

Now let us examine in some detail each one of the trends mentioned previously. The first trend was "the growing recognition on the part of management of the importance and value of safety work." Progressive managements know that safety activity is important not only from the standpoint of minimizing pain and suffering and death due to injury on the job, but that safety is also important as an employee relations vehicle. Who is closer to the men and to supervision than the safety engineer or director? Who is always working for the best interests of the men, to improve their working conditions, to see that they have the proper protection, and who helps them when they are hurt and are hospitalized? The safety man! And it is he who, because of his unique position in the company, has tremendous possibilities for improving the morale of the employees and for making good employee relations.

Progressive managements also realize that safety promotes economy of operation through job analyses, job procedures, and job methods, because it has been amply demonstrated that the safe way to do the job is the best way to do the job. Production engineers agree that accident prevention is an important fac-

tor in economy of operation, for safety saves money through the reduction of costs: claim costs, medical costs, insurance costs, and the costs of time lost and equipment damaged due to accidents. Safety also conserves the manpower which is so vitally needed for our defense effort.

Your attention is called to a set of principles, appearing elsewhere on this page, which have been drawn up by the Accident Prevention Committee of the Edison Electric Institute for the guidance of executives of the industry.

We do have executives in the utility industry who are farsighted and who realize the importance of safety, and I quote from the address made by A. T. O'Neill, then president of Buffalo Niagara Electric Corporation, at the annual convention of the Edison Electric Institute three years ago. He said:

> There is no substitute for sustained active participation by the heads of the organization. If we want a safe organization badly enough, then we ought to be able to keep at it on a day-by-day basis. There is a chain of responsibility that binds you and me closer than is comfortable to these deaths and injuries, if we are to face the issues squarely.

Where the Safety Job Belongs

The next trend mentioned dealt with putting "the safety job back where it belongs—on the line executive." About twenty years ago in this country, when personnel work was first coming into its own, management conceived the idea that it could turn all personnel problems over to personnel specialists and that these problems of human relations could be handled by these specialists, thus taking this load off the foreman and allowing him to concentrate his efforts on production. Now this was true not only of personnel problems, but there was a tendency also to take this same course with regard to safety and to hire a safety engineer and tell him that he was responsible for safety in the organization. It wasn't too long before it was found that this was an unwise policy—that dealing with men is the function of supervision.

It is true that we have plenty of help from our personnel departments, but the actual work with the men is done through the supervisor on the job—through the foreman. And so it is with safety. Safety is a supervisory function. The foreman is closest to his men, knows what is going on, and is responsible for safety. The safety director's job is a staff function: he advises, he helps, he consults, he gets the figures, he stimulates the program, but the ultimate responsibility for safety rests on supervision from the top of the company down to the foreman on the job.

I just had a heartening experience in this respect. We just concluded a seminar in Public Utility Safety, which is conducted each year by my company. When we first started these seminars three years ago, most of the students were safety engineers and training directors. Since that first session, there has been an increasing interest in the seminar on the part of operating people, and at this last seminar, just concluded, there were eight safety men and twelve operating people taking the course: supervisors, superintendents, division managers, chief engineers, and people of that type who are keenly aware of their responsibility for safety and want to know how to make safety work on the job.

The third trend listed was that "engineers, designers and operating executives are showing a greater awareness of safety." These men are becoming increasingly aware that many hazards can be eliminated in the design stage and on the drawing board. There is a keen interest in safety articles, in technical publications, and in safety papers presented before various technical societies. The Edison Electric Institute Transmission and Distribution Committee has set up a subcommittee on safety. This safety subcommittee conducts a safety discussion at every meeting of this very important committee. Just recently it presented a panel on "the safe plant."

Fundamental Principles of Safety for Utility Executives

Prepared by the EEI Accident Prevention Committee

1. Prepare a clear and concise definition of company policy with respect to safety so that everyone in the organization will know precisely what top management expects of him in the promotion of accident prevention.
2. Maintain an adequate safety department and approve all reasonable budget items and expenditures for safety equipment. Money spent for safety is a good investment.
3. Follow the accident trends. If the trends are adverse, call for reasons. If the trends are favorable, let your organization know that it has been noted and that you are pleased.
4. Weave safety into the fabric of every operation in the company. Do not consider it to be a sideline and the sole responsibility of the safety director.
5. Call for detailed reports on all serious accidents, whether or not injuries result. Study these reports to make sure that the true causes have been found and that suitable corrective action has been taken.
6. Employ potentially safe men and women at the outset and maintain a regular health inventory and job placement program to serve if and when age and physical condition dictate the need for consideration.
7. Provide adequate training for all employees to assure that the work is done correctly (safely). Most accidents result from a lack of knowledge or understanding of the process and a lack of appreciation of the hazard involved.
8. Fix responsibility fairly but firmly. Rate all supervisors and foremen on their ability and willingness to accept full responsibility for the safety of those whom they supervise.
9. Sample the program occasionally by personal observations and visits at safety meetings. Keep accident prevention constantly in your conversation with your subordinates.
10. Assume active leadership in promoting off-the-job safety among your employees and contribute generously of your time and money to safety councils and other community-sponsored safety programs. Money spent for community safety is a sound business investment, not only in terms of the deep human satisfaction that comes from the knowledge that you are protecting your fellow man, but also in terms of improved public and employee relations and real financial benefits for your company.

Also, in the American Gas Association the various operating committees pay great attention to matters of safety. The American Institute of Electrical Engineers, at its annual conventions, is paying more attention to accident prevention, and more papers are being presented on matters of safety. And I know that the engineers in my own company are keenly aware of the safety problems connected with the design and construction of power plants and other facilities.

Improved Work Methods

The fourth trend noted was the "increasing use of job analysis, job standards and improved work methods." Some individual companies, the larger companies, have done a great deal along this line in incorporating safety in work methods, procedures and standards. To emphasize the importance of this point, I quote from a talk given by K. R. MacKinnon, president of Ebasco International Corporation, at the National Safety Congress two years ago:

> Next in importance in our things to do is to develop Job Analysis on a major scale. You safety men talk about it as 'On the Job Safety,' but we all know that safety should start before the job. We should have handbooks of instructions on every type of work and should discuss the hazards of each job before it is tackled. Too many men have gone to their deaths because the foreman said, 'Let's go, boys,' without explaining in detail how the job was to be done or checking up to see if he and his men understood what the hazards were. Job analysis is a major job for you operating men. As an example of the extent to which job analysis can be developed, the Bell System has a 35-page pamphlet on Extension Ladders. Imagine, 35 pages describing ladders and their proper use, safety precautions, inspection and care. That seems like a lot of details to put out about ladders, but just remember those accident figures—one-tenth of the electric—one-fourteenth of the gas. It pays off, and pays off big!

The fifth trend referred to was "the importance of selection, training, and supervision in the safety program." When I speak of selection, I mean selection for initial employment and selection for advancement. The selection process involves the hiring of men who are physically, mentally, and emotionally capable of doing the job for which they are employed and, further, seeing that those selected have the characteristics which will enable them to be promoted in the organization to more responsible work. There has been, as many of you know, increased activity with respect to testing programs. However, to date the most important tools still remain the personal interview and the history and work experience of the applicant. Of course, tests of skills may be used after short training periods, and tests are essential when promoting men from one grade of work to another requiring greater skill.

This brings me to training. Training new employees, indoctrinating them properly into the company, and conducting schools, such as lineman training schools and other schools where skills are taught, are, of course, of utmost importance. It is vitally important to see that the employee gets started right on his job and is instructed in the safe and proper manner of doing his work. Training on the job by the supervisor, however, is of the prime importance, and here it is necessary that the supervisors be given the tools with which to work—be given the job analyses and the proper work methods and the standards. They should have a hand in working out these analyses, standards, and work methods, and this is training in itself. The supervisor, in turn, should be trained how to teach. The supervisor, to be a good supervisor, must be a teacher and a leader of his men.

Indeed, supervisory training is perhaps the most important phase of the whole training activity, and it is in this training that safety can be made most effective. As stated previously, it is necessary to give the supervisors the knowledge and the tools in order for them to do the job which is expected of them. It is also important that supervisors be carefully selected for their ability to get work done and for their personal qualifications in promoting good relations with their men. Having selected a good supervisor and having given him the training and the information and the knowledge necessary for him to carry on his job, the company must then back him up in his decisions and see that he is wholly supported in what he thinks is right.

I cannot leave this subject without referring to the importance of attitudes. To have the proper attitude, one which is conducive to teamwork and cooperation and willingness to work safely and one which will insure that work is done properly and safely at all times, it is necessary to lay a foundation which goes down to bed rock. Employees and supervisors all the way up the line must be convinced that management is interested in them as individuals, and they must be convinced of management's interest in seeing that work is done safely and that all the proper tools and necessary safety equipment are provided for all jobs.

An Index of Supervisory Performance

The employee must be sold on the company's employee relations program and the benefits that he receives working for the company. If the man receives these benefits and is trained properly for his job, if he gets a square deal at every turn and knows the workings of the company and what the company is working for, and if he is imbued with the idea of service on his job and service to the public, he will then have an attitude which will be conducive to good work safely accomplished. Accidents can be used as an index of supervisory performance. It is a fact that on work well done, which has been carefully planned and executed and with good housekeeping conditions prevailing, the prevention of accidents follows naturally.

These trends that I have enumerated seem to me to be the broad trends which will eventually lead to an improved safety record in our industry. Some companies are following all of these trends, and others are doing work in respect to some of them, but why can't all of the companies in the industry follow all of these trends?

We in the utility industry are in an industry of which we are proud. We do our part in war and in peace, we are proud of our technical advances, we are proud of our service. Should we hang our heads over our accident record? The answer is no! By following and cultivating the trends I have outlined here today, we can and will become proud of our safety record and all that record implies.

Subsidized Waterways

"PERHAPS the greatest illusion respecting water transportation has to do with its cost. There is one line of reasoning which implies that there is something magical about water transportation. The reason is fairly obvious; the cost of building and maintaining the waterways is nearly always borne by governmental bodies, while the benefits of the low cost of actually moving the goods accrue to the advantage of private companies. Unless a given project will result in a substantially lower total cost—public and private—of transportation for a large area of the public, there is no more reason to subsidize water transportation than there is to subsidize any other form of transportation."

From *Economic Resources and Policies of the South* by Profs. Calvin B. Hoover and B. U. Ratchford, Department of Economics, Duke University.

Young Men of Indiana Utilities Attend Annual Conference

A RECORD attendance of over three hundred young men, representing all electric companies in Indiana, was established at the Annual Young Men's Utility Conference, sponsored by the Indiana Electric Association on April 10-11. Held in Ipalco Hall, the employee recreation center of the Indianapolis Power and Light Co., the conference had as its theme "Tomorrow—Especially in the Electric Utility Industry."

Presiding officers at the various conference sessions were young men from the member companies of the Indiana Electric Association. Richard H. Schnakenburg, Southern Indiana Gas and Electric Co., presided at the first business session: M. J. Klich, Northern Indiana Public Service Co., at the annual banquet; Jerrell Simmons, Public Service Co. of Indiana, Inc., at the second business session; and Warren W. Widenhofer, Indiana and Michigan Electric Co., at the closing session.

H. T. Pritchard, vice president of the Association and president, Indianapolis Power and Light Co., welcomed delegates and pointed out in his opening remarks that "The electric industry is one of the most progressive industries in the nation, offers more and better opportunities for young men than almost any other, and it has an unlimited future."

Tom A. Burke of the National Safety Council reminded delegates that most accidents occur because of human failure, and he emphasized that clear thinking, control of emotions, and strict attention to the problems of the moment would tend to eliminate the majority of all accidents.

Discussing "Public Relations," E. R. Kropp, assistant to the president, Union Electric Co. of Missouri, pointed out that public relations is everybody's business, not just the province of one department, and he advised the young men present to continually sell themselves, their company, and their company's products.

A feature of the program was a panel discussion on the topic, "Know Your Industry," with Robert E. Tapp, Southern Indiana Gas and Electric Co., acting as moderator. Members of the panel were R. W. Fackler, Indiana and Michigan Electric Co., who talked on "Production"; Everette L. Baynes, Public Service Co. of Indiana, whose subject was "Transmission and Distribution"; Allen H. Peterson, Northern Indiana Public Service Co., speaking on "Financing"; and Charles E. Borders, Indianapolis Power and Light Co., who discussed "Promotion." The speakers cited the growth of the industry in Indiana, the ability of the industry to provide adequate service to all parts of the state now and in the future, and emphasized the job to be done to keep the industry prepared. Expressing the feelings of the panel, Moderator Tapp said that "Certainly no other industry so filters through the entire life of a community as does our electric industry. Nothing new is started without our service, be it a new home, new factory, or improvements in the standards of life on the farm. . . Collectively, and as individuals, we must exert more and more effort toward preserving industry, particularly our industry, as part of the free enterprise system on which this country has grown and given its citizens the highest standard of living the world has known."

Discussing "The Electric Utility's Challenge to Young Men," W. T. Richards, Indianapolis Power and Light Co., advised delegates that "Your advancement depends on your ability to accept additional responsibility at each and every opportunity. . . As tomorrow's leaders, bear in mind always that regardless of who you are, your virtues and your vices will be reflected in what you do and those you lead."

O. L. Norman, National Association of Electric Companies, talking on "Public Power and its Impact on Private Initiative," reminded the group of the danger of government encroachment to the industry. He pointed out that the problem should not necessarily be considered as a fight betwen private and public power but a question of what is the correct relationship between the two. He stated that there is "government for the few, rather than for all, when all of the people are taxed to supply power for comparatively few in just a certain area . . . and that is exactly what is happening with government power projects. . ."

Dr. Frank H. Sparks, president, Wabash College, spoke on the infringement of government on education and also called attention to the work being done by various educators to present factual data to lawmakers in Congress.

Herbert C. Graebner, dean, College of Business Administration, Butler University, listed as dangers which might beset future economic conditions the growing dependency of the individual on government, the desire for work without wealth, and uncontrolled inflation. He cited the re-examination of American philosophy and the maintenance of the free enterprise system as methods of sidestepping these dangers.

To inform delegates on some of the latest developments in general lighting, a stage show, "Light Sorcery," was presented by Horace G. Schiller, lecturer and lighting engineer, General Electric Lighting Institute staff. Concluding the conference was a talk in a lighter vein, "The Anatomy of Humor," given by R. N. Snyder, principal, South Side High School, Fort Wayne, Ind.

Industry and the Defense Effort

(*Continued from page* 152)

letters of How Our Business System Operates. We are using this method throughout our organization and stressing its use by trained leaders for civic and church groups; in fact, whenever a gathering of 12 or 14 interested people could be formed into a discussion group. These are just three suggestions, not original I know, of what the sales group might do in the present emergency.

Peace is what we seek, of course, but peace is not made at peace conferences so much as at international meetings of an economic nature. In the same measure, strength is not built overnight by emergency programs of mobilization, but by the slower day-by-day haul of business activity. This is the role in our national defense that people such as those in this room have always played, but it was familiar to us and we did not always observe its real importance. Today we are invited to acknowledge its importance and to push forward along the paths we know best, tempering our drive with discipline, intelligence, and proper sacrifice of selfish ends. That is the task for everybody in industry. It is certainly the primary task of the electrical industry.

Highlights of Excess Profits Tax Act of 1950

By Leo A. Diamond

Chadbourne, Parke, Whiteside, Wolff & Brophy

An address before the National Conference of Electric and Gas Utility Accountants, Chicago, Ill., April 25, 1951

EXCESS profits taxation is a phenomenon of war-time economy, whether or not full scale military hostilities are carried on. Just as costs of war do not cease when the last shot is fired, neither do they await the firing of the first shot. Unfortunately, during the past 34 years, this country has twice found itself involved in world-wide warfare and is now engaged in extensive military preparations in the fervent hope of preventing a third world conflagration. Thus, three times our government has seen fit to impose an excess profits tax designed to limit the retention of profits realized from the production of implements of war, performance of defense or war-time services or increase of business resulting directly or indirectly from defense activities or war-time inflation.

All Things to All Men

The term "excess profits" means all things to all men. Unlike other forms of tax, mere mention of a tax on excess profits arouses great and heated controversy. Even many of those who support it during times of national emergency as a rough but ready means of taxing profits concede that it is erratic and inequitable in calmer days. Others, friends of the principle of an excess profits tax, admit the tax is "discredited by clumsy means" but nevertheless support its place in the federal tax system. The nub of the controversy about desirability, effectiveness, and equity of an excess profits tax lies primarily in the determination of how much of the taxpayer's profits shall go untaxed. Thus, there is considerable disagreement on what is really meant by excess profits or profits that are so excessive as to be subjected to additional tax. It is, therefore, not far from the truth to say that at least the most important technical development of excess profits taxation since 1917 lies in the expansion of the concept and reach of the excess profits credit.

The excess profits credit is the statutory device of freeing from excess profits tax that portion of corporate profits which, at the time, Congress believes should be left untrammeled for corporate purposes. Ideas change as does the make-up of Congress; it is not surprising, therefore, that there have been significant alterations in the concept and scope of excess profits credits since 1917 and even since 1940. In March, 1917, the first excess profits tax was imposed upon corporate net income which exceeded 8 per cent of invested capital. Seven months later, the law was changed so that earnings of the taxpayer, realized during the pre-war period, 1911-1913, were in effect used as a basis for credit by permitting rate of return on taxpayer's invested capital equal to its average rate on such pre-war earnings but not less than 7 per cent nor more than 9 per cent. Subsequently, in 1918 the taxpayer had to pay the higher of two taxes, namely, an excess profits tax upon income over and above 8 per cent of invested capital and a war profits tax upon income over and above taxpayer's average earnings in the pre-war period, 1911-1913. For two decades more, American corporations had no excess profits tax troubles, but little did they realize that what they were doing in 1936 to 1939 might rise to plague them later taxwise.

The Defense Program of 1940 called forth extraordinary measures, including a more sophisticated and concomitantly more complex excess profits tax. Conceded that not all profits were to be taxed away, there broke out anew the controversy as to whether the credit should be measured in terms of invested capital, as desired by the Treasury Department, or measured in terms of earnings of a prior period, as urged by a very substantial portion of American business and industry. Congress resolved that conflict in a manner which, to a student of legislative processes, would not be considered suprising: It permitted the taxpayer to use either the invested capital method or earnings method, whichever resulted in the higher credit for excess profits tax purposes. That choice of alternatives was a form of legislative compromise which, in a sense, betrayed the absence of a clear-cut logical concept of excess profits.

The Treasury Department opposed the use of the earnings method in determining an excess profits credit because it felt that a substantial amount of war profits would escape taxation through the use of an arbitrary basis of credit. It believed that a credit based on capital would be more effective in subjecting to tax profits which should bear the heavy burden of emergency taxation. Yet, one could not overlook the fact that in some instances a taxpayer would avoid a substantial portion of its tax burden through reliance on a capital structure created many years before and having no relationship whatsoever to the earning capacity during the war period. In any event, it is interesting to note that statistically more taxpayers relied on the earnings method in computing their excess profits credit under the World War II excess profits tax than those who relied on the invested capital method. Whether that experience bore out the Treasury Department's forebodings or whether it merely meant that limiting the credit to invested capital would have accentuated inequities, is beyond the scope of this discussion.

Third Excess Profits Tax

The World War II excess profits tax was repealed as of the end of 1945 in response to demands therefor not only from taxpayers but from the Treasury Department itself. Whereas 20 years or more elapsed between World War I excess profits tax and World War II excess profits tax, the third excess profits tax was destined for enactment after only a lapse of five years. Even as early as 1948, the president spoke of the need of an excess profits tax. As a result thereof, bills were introduced for the reimposition of such a tax. These were ignored by Congress. Administrative pressure and the impact of world events increased with such force and rapidity, however, that, after some vacillation, the Congress was forced to enact late in 1950 the present excess profits tax.

The present tax is patterned largely along the lines of its World War II

counterpart. There are substantial similarities but at the same time there are also significant differences. They share a common attribute—extreme complexity. If anything, the new tax is much more complex than its predecessor and bids fair to provide a most fruitful source of litigation for several decades to come. A substantial amount of the complexity arises from sheer inartistic draftsmanship, which is the inevitable result of the extreme haste in which the Excess Profits Tax Act of 1950 was thrown together in a few weeks. Presumably, at least a reasonable measure of the difficulties arising from draftsmanship may be eliminated through corrective amendments formulated at a more leisurely pace. Even after that is accomplished, there will still remain inherently complicated concepts and computations. These will have to be accepted as integral aspects of an excess profits tax which represents various forms and degrees of arbitrary legislative compromises.

Summary Analysis

To a summary analysis of the leading features of the present excess profits tax, the following discussion is devoted. By choice and necessity, comparisons will be made with like features of the last excess profits tax. Special attention will be given wherever possible to the impact of the present law on electric and gas public utilities.

The present excess profits tax rate is 30 per cent and is in addition to rates of normal tax and surtax aggregating 47 per cent. Hence, the portion of corporate income which is subject to normal tax, surtax, and excess profits tax bears a maximum total tax rate of 77 per cent. Under the earlier excess profits tax, the comparable figure was 85½ per cent which represented a gross total rate of 95 per cent, reduced, however, by a 10 per cent post-war refund.

Ceilings

To say no more about rates at this point would be clearly to tell only part of the story. At present, the combined rate of normal tax, surtax (including the additional 2 per cent surtax in case of consolidated returns) and the excess profits tax—all applied to excess profits net income—cannot exceed 62 per cent of excess profits net income. The exclusive purpose of the ceiling is to limit the amount of excess profits tax payable, not the amount of other income taxes. Thus, when the ceiling is applicable, the amount of excess profits tax is limited to the difference between 62 per cent of excess profits net income and the aggregate of a theoretical normal tax and surtax (including the additional 2 per cent surtax in case of consolidated returns) determined on excess profits net income. The real or actual normal tax and surtax paid are irrelevant to the limitation; likewise, the actual normal tax net income or surtax net income is immaterial. In sum, the total taxes actually payable are not necessarily 62 per cent of either normal tax net income, surtax net income or excess profits net income. The total amount actually paid may be either more or less than 62 per cent of any of them.

In effect then, the 62 per cent limitation means 62 per cent of excess profits tax net income plus or minus income tax on the net differences of income caused by excluding from excess profits net income such items as capital gain, dividends received, disallowed interest deductions or borrowed capital, and other similar items. Inasmuch as ultimately the applicability of the ceiling depends upon the excess profits credit, that ceiling may be disregarded if the credit is more than 50 per cent of excess profits net income.

Under World War II excess profits tax, a somewhat comparable but nevertheless different type of ceiling restricted the total rate of income tax, surtax, and excess profits tax to something more than 72 per cent of surtax net income after allowance for the 10 per cent post-war credit.

Differences in Rate Structure

Before turning to a description of how excess profits net income is determined, a further word is appropriate as to the differences in rate structure of excess profits tax under the present Act and its World War II counterpart. Under the latter tax, there were two "baskets" of income. Every dollar of corporate taxable income was either subject to normal tax and surtax in the one basket or to excess profits tax in the other basket. Any adjustment in excess profits tax meant a further adjustment in normal tax and surtax; any adjustment in ordinary income tax necessitated a change in excess profits tax. At the present time, however, that interdependence of taxes is avoided. An adjustment in excess profits net income alone will have no effect on the normal tax and surtax inasmuch as the excess profits tax is an additional tax. An adjustment in income subject to normal tax and surtax may or may not require a further adjustment in excess profits tax. Abandonment of the two basket approach permits treating the income tax and excess profits tax as one tax for determining interest on refunds and deficiencies, periods of limitations for assessment and refund purposes, issuance of statutory notices of deficiencies, and for other administrative purposes.

Adjustments to Net Income

As in the case of World War II excess profits tax, the present law requires that in computing income subject to excess profits tax, start must be made with normal tax net income. To such net income a number of adjustments are made for taxable years beginning on or after July 1, 1950, the effective date of the tax. Principal adjustments are briefly as follows:

First, in lieu of the 85 per cent dividends received credit on dividends from domestic corporations, all dividends from domestic and foreign corporations are excluded, except dividends on stock of foreign personal holding companies or on any stock which is not a capital asset. That adjustment is, however, subject to the limitation on the dividends received credit in the case of dividends in kind, i.e., limited to the extent of the basis of the property in the hands of the distributing corporation. Second, public utility companies which are permitted, for ordinary income tax purposes generally, to a credit for dividends paid on certain preferred stock will be denied that credit for excess profits tax purposes. Third, a special credit allowed Western Hemisphere trade corporations for ordinary income tax purposes is not allowed. Fourth, capital gains and losses, whether long-term or short-term, are excluded.

Other Exclusions

Fifth, there are also excluded such items as income and deductions arising from retirement or discharge of certain obligations outstanding for more than six months, recoveries of certain bad debts, non-taxable income from certain exempt excess output of natural gas companies, taxes paid by certain lessees, and certain blocked foreign income. Sixth, adjustments are also required with respect to operating loss deductions other-

wise allowable. Seventh, if the excess profits credit is based on invested capital, then the deduction for interest otherwise allowable on so-called borrowed capital is reduced by 75 per cent, because, as will be explained further, 75 per cent of borrowed capital is included in determining the excess profits credit. If the excess profits credit is based on earnings, then the interest deduction is adjusted under a formula which has the effect of making the disallowance proportionate to increase in borrowed capital. Lastly, any amounts which are paid by the government, either as loans or grants for the purpose of encouraging exploration for, or mining of, critical strategic minerals, are excluded, as are expenditures of such funds.

Two Material Exceptions

Except for minor variations, similar adjustments were required in determining excess profits net income under the World War II law. Two material exceptions may, however, be noted. Under the earlier law, no adjustment was required for dividends on stock of foreign corporations if the taxpayer was using the earnings credit. Furthermore, in the case of public utilities no adjustment was required, as is the case now, for the credit of dividends paid on certain preferred stock.

The foregoing adjustments, as well as other miscellaneous adjustments (including abnormalities in amount or kind of income) must be made to arrive at excess profits net income of the taxable year. The excess profits tax rate, however, is applied to an amount called adjusted excess profits net income after deducting the excess profits credit (based either on invested capital or earnings or, in the case of public utilities, an alternative special credit) and an unused excess profits credit, if any, from either the next succeeding year or from a prior year or years not earlier than the fifth preceding year.

Determination of Excess Profits Credit

At the beginning of this paper I pointed out that probably the most important and undoubtedly the most complicated area of excess profits taxation is the determination of the excess profits credit itself. The remainder of this discussion will deal with a very general analysis of what, under existing law, makes up the credit.

The effectiveness and fairness of an excess profits tax depends, of course, in the main on the scope of the credit. If the credit is rigid, inflexible and comparatively small in amount, the resulting tax may be harsh, inequitable and even confiscatory. If, however, the credit is too lenient, the resulting tax may turn out to be inconsequential and ineffective for accomplishment of justifiable legislative purposes. In between those two extremes there is considerable room for various forms and degrees of relief. Under the present Act there are at least fourteen different methods of computing the excess profits credit. Eleven of those methods relate to the credit on the earnings basis and two to the credit on the invested capital basis. Regulated public utilities are entitled to an alternative relief method which is based heavily, but not entirely, on invested capital. No such wide choice of alternatives was available under the World War II excess profits tax law.

Under the World War II excess profits tax, there was no minimum credit, but there was a $10,000 exemption. At the present time, however, each corporation is entitled to a minimum credit of $25,000 which includes not only the excess profits credit for the year but any unused credit from another year. Thus, for example, if for any year the excess profits credit and unused credit aggregate less than $25,000, the total credit is nevertheless raised to $25,000. By removing many small businesses from tax, the minimum credit device for 1951 is estimated to confine the excess profits tax to about 80,000 corporations out of approximately 500,000 corporations in this country.

Credit Based on Invested Capital

For convenience sake, the credit based on invested capital is described first. Invested capital is made up of two major elements—equity capital (including retained earnings) and 75 per cent of borrowed capital. Invested capital is subject to adjustment for inadmissibles, consisting of domestic corporation stock and certain tax-exempt governmental obligations. The present law has made significant departures from the earlier excess profits law in computing the invested capital credit. First, the rates of return are more liberal than heretofore. They are now 12 per cent on invested capital of $5,000,000 or less; 10 per cent on over $5,000,000 to $10,000,000; 8 per cent on over $10,000,000. Earlier comparable rates were 8 per cent, 6 per cent and 5 per cent. Secondly, borrowed capital is presently included at 75 per cent instead of 50 per cent as before; furthermore, borrowed capital now encompasses conditional sales contracts and bank loan agreements including indebtedness to a bank. Thirdly, determination of equity capital is handled differently, along substantially the following lines.

The "Asset Approach"

At present, the primary method of determining equity capital is popularly called the "asset approach." It involves subtracting from total book assets the total of book liabilities, both as of December 31, 1949, plus any so-called "recent loss" adjustment. Book assets are valued, except in the case of certain intangible assets, at adjusted basis for gain (i.e., cost) or March 1, 1913, value, whichever is higher, plus or minus later basis adjustments. Only assets held in good faith for business purposes may be included in determining invested capital. The recent loss adjustment is the net deficit (i.e., excess of operating losses over net income) in the period 1946 to 1949 or 1940 to 1949, whichever is the larger.

This primary method under the present law was unknown (except in a limited sense) to the earlier law. It was introduced in part to liberalize and to simplify the determination of invested capital as contrasted with the "historical investment" concept of equity capital found in the World War II law. Equity capital under the historical capital method means generally money and property previously paid in for stock or surplus at income tax bases in addition to retained earnings and profits, less distributions of capital to stockholders. Liberalization does not, however, affect all taxpayers the same way. It is not surprising, therefore, that the present law also retains the earlier historical invested capital approach which is operative only on affirmative election of taxpayer for each taxable year. Hence, a substantial amount of simplification has gone out the window with this example of legislative compromise.

Contrasting Attractiveness

A word about the contrasting attractiveness of the two methods is appropriate at this point. In many respects the principal difference between the two methods lies in the effect of deficits. Under the new asset approach, any net deficit occurring before either 1940 or 1946 reduces capital or surplus paid in before either date. Furthermore, a net

deficit in the ten-year period, 1940-1949, or in the four-year period, 1946-1949, does not reduce capital or surplus whatsoever nor any profits earned before 1940 or 1946. Under the traditional historical capital approach, a net deficit over any period of years does not reduce paid-in capital or paid-in surplus. Hence, the new method is more attractive to a taxpayer with recent losses, whereas to a taxpayer with an overall net deficit the traditional method has greater appeal. Any net deficit in the period 1946 to 1949, not used as a carry-back, can be utilized to reduce 1950 and 1951 excess profits net income under the old but not new approach.

New Capital Additions

New capital additions in the taxable year are treated differently under both methods. When the new approach is utilized, those additions are computed at a flat 12 per cent rate whereas if the older approach is followed, those additions are taken in at the graduated rates, 12 per cent, 10 per cent or 8 per cent, depending on the amount of taxpayer's assets. Extensive computations must, therefore, be made in many instances before taxpayers can be certain which method, historical or asset, will result in the larger credit. Notwithstanding the special relief method afforded public utilities, some of them may well find the invested capital credit attractive.

Computation of the credit under the earnings method can be a most complicated task. Under the earlier law, the base period was 1936-1939, inclusive. Average base period earnings were determined on either a mathematical average, where the worst year could be brought up to 75 per cent of the average of the other three years, or on a growth formula, which gave effect to mathematical increase in earnings during the last half of the base period. Various adjustments had to be made to income of the base period years, somewhat similar to the adustments made during the taxable years subject to excess profits tax. Cognizant that fixed mathematical formulae would cause inequities in determining base period earnings, and remembering the special assessment procedure of the World War I excess profits tax, Congress permitted special relief under the well-known Section 722, dealing with constructive average base period net income. Taxpayers could qualify for relief if they could show that in the base period there were unusual interruptions or diminution of production, output or operation, unusual business depressions, either peculiar to the taxpayer or to its industry, extraordinary changes in the character of the business, and any other factors affecting the taxpayer's business. In any event, the taxpayer had the burden of showing the extent to which its actual earnings were inadequate as a measure of being a basis for the credit.

It is the latter requirement that has made Section 722 relief so difficult to obtain. Constructive base period net income is at best sheer conjecture, because determined on extremely hypothetical conditions. The quest for such constructive income is no easier than the scholastics' search during the Middle Ages for the precise number of angels who could dance on the head of a pin. Under Section 722 the search is in fact further complicated because it involves determining how many angels can stand on the shoulders of those who can dance on the head of the pin!

Capital additions or reductions during the base period were of no effect in determining the earnings credit under the prior law. Only capital additions or reductions occurring after the base period were taken into account.

The Earnings Credit

Determination of the earnings credit, even aside from alternative relief provisions, under the present law is far different. The earnings credit now is based on 85 per cent (in lieu of the prior 95 per cent rate) of base period average earnings during the four calendar years, 1946-1949, inclusive. The general rule is to compute the arithmetical average of the three best years (more specifically, the best 36 months) in the base period, any deficit year being treated as zero. The 48-month period beginning January 1, 1946, and ending December 31, 1949, is used whether the taxpayer is on a fiscal or calendar year basis. Unlike prior law, the present Act provides that the earnings credit may also be increased for net additions to capital during the base period. Thus, the present law provides that one-half of the net additions to capital in 1948 and 100 per cent of such additions in 1949 may be used to increase the credit. Similar adiustments are made for net capital additions after the base period. Interestingly enough, net decreases in capital during the base period in no way affect the average earnings credit, but, as under the prior law, decreases occurring after the base period require a reduction in the credit. The rate for additions or reductions (including retained earnings and borrowed capital) is 12 per cent, which ties in with a comparable adjustment made under the asset approach of invested capital heretofore discussed.

Adjustments to Base Period Earnings

As under prior law, certain adjustments must be made to the base period earnings to put them on some parity with earnings of the taxable year. Under the earlier law, adjustments of base period earnings included disallowance of deductions attributable to casualty losses and payments of claims, awards and judgments if abnormal in incidence or in amount, as therein defined. A substantial amount of relief is potentially available under the earlier law by such adjustments. However, under the present law such comparable adjustments would appear to be of comparatively limited value because, unless the deductions of any class of the kind here discussed do not exceed 5 per cent of the average excess profits net income during the base period, the adjustment is not made. Accordingly, comparatively few taxpayers will find any comfort in the present law in this regard.

Section 722 relief under the World War II tax was an attempt to provide discretionary relief on an individualistic basis. Out of the confusion in the administration of Section 722 has arisen the present approach of giving alternative relief in addition to the general average method. The alternative relief methods of computing average base period earnings are predicated more or less on automatic criteria. It remains to be seen, however, if, because of their number and complexity, those alternative relief methods will ultimately prove less difficult of administration than Section 722 relief.

Of the ten alternative methods of determining average base period net income, six relate to relief for abnormal situations as a substitute for the discretionary relief under Section 722. The outstanding change over the earlier law is the introduction of a new device, namely, base period rates of return proclaimed by the Secretary of the Treasury for each of 64 different industry classifications, in accordance with specifications in the Standard Industrial Classification Manual prepared by the Bureau of the Budget. The rate of return for

each classification is determined by dividing the sum of the aggregate net income and aggregate interest deduction reported on income tax returns filed by corporations in the industry by the aggregate total assets of such corporations, as of the close of the taxable year for which the returns were filed.

Two of the six methods mentioned relate to determination of average base period net income, where such income has been substantially reduced as a result of unusual interruptions of production by physical events or because of economic conditions. In such a case, average base period net income is determined by applying the proclaimed rate of return for taxpayer's industry classification to its average assets during the base period. To prevent trivial relief claims, reconstructed income may not be used if it does not exceed by 10 per cent income computed under the general average.

Change in Products or Services

Additional substitutes for discretionary relief are to be found in the constructive average base period net income based on change in products or services. In order to qualify for relief under the new product provision, the change must have been "substantial," meaning thereby that by the end of the third year, or sooner, following the year in which new products or services were introduced, taxpayer's gross income therefrom must be more than 40 per cent of its total gross income or one-third of its net income in that year. The taxpayer must also show that its net income in any taxable year in which it has satisfied the aforementioned percentages was greater than 125 per cent of average excess profits net income during the base period year or years prior to the first change in product or service used in qualifying under the income tests. Substitute average base period net income is computed by the application of the base period rate of return assets as of a given year, depending upon whether qualifications occurred during the base period or thereafter. No adjustment for capital additions in the base period is permitted.

Additional relief methods relate to certain corporations which have at least doubled their capacity for production during 1947, 1948, and 1949 over 1946 capacity or have commenced business after the beginning of the base period, namely, so-called new corporations. These methods involve application of industry base period rate of return. Lastly, special relief is provided for so-called depressed industry subgroups, namely, for taxpayers in industries whose average earnings rate during the period, 1946-1948, inclusive, was less than 63 per cent of the average rate during the eleven-year period, 1938-1948, inclusive. The average base period net income of a taxpayer in such an industry is arrived at by multiplying its average assets during the base period by a figure equal to 80 per cent of the rate of return for such industry during the period, 1938-1948, as proclaimed by the Secretary of the Treasury.

Public utilities engaged in the production, transmission, or distribution of electricity or gas are, of course, eligible to avail themselves of all the relief methods described. It is obvious, however, that in most, if not all, cases such a utility which began business prior to 1946 would have little chance of qualifying under the change of products or services itself. There may, however, be interesting opportunities for relief under the tests relating to substantial increase of capacity for production and commencement of business after 1945 in the case of a new corporation.

Growing Corporations

The remaining four alternative methods relate to the computation of income in the case of so-called growing corporations which began business before 1946. To obtain relief as a growing corporation, the taxpayer must satisfy either one of two major tests. Under the first test, a taxpayer will qualify if its total payroll for the last half of the base period is either 130 per cent or more of its total payroll for the first two years of the base period or, alternatively, if its gross receipts during the last two years are 150 per cent more of its gross receipts for the first two years. In either case the taxpayer's total assets at the beginning of the base period must not be more than $20,000,000. The latter amount includes assets of a group of corporations that may file a consolidated return, even though no consolidated return is actually filed.

The second test is satisfied if the taxpayer meets all of the following conditions, irrespective of the value of its assets: (a) net sales for the first six months of 1950 are 75 per cent or more of the average net sales in the calendar years 1946 and 1947; (b) 40 per cent or more of net sales for the calendar year 1950 are attributable to a product or class of products not generally available to the general public in 1945 or earlier; and (c) net sales attributable to such a product or class of products in the calendar year 1946 are not more than 5 per cent of net sales in 1949.

Any calendar year taxpayer that qualifies under either the first or second test may determine its alternative average base period net income on the basis of its actual income in 1948 and 1949, its actual income in 1949, or 50 per cent of its actual income in 1949 and 40 per cent of its actual income in 1950. A still further alternative is open to taxpayers qualifying under the second test whose excess profits net income for 1949 is not more than 25 per cent of its excess profits net income for the calendar year 1948.

Alternative Relief

Public utilities are again free to utilize whatever relief is available under the alternative basis for growing corporations. It does not seem possible, however, that an electric or gas utility could qualify under the second test because electricity and gas would be considered as having been generally available to the general public before 1946, even though in particular areas prior to 1946 there may not have been any of such services furnished. It is generally understood that the second test was designed to take care of new industries such as television.

At the hearings before the Committee on Ways and Means of the House of Representatives on the 1950 excess profits tax, representatives of electric and gas utilities proposed several recommendations to lighten the impact of excess profits tax. As you know, there were many in the utility industry who opposed any excess profits tax; that view was not unanimous by far. Congress did not follow the precise recommendations contained in proposals bearing approval of committees of the Edison Electric Institute and American Gas Association. It did, however, provide a special form of alternative relief available exclusively to regulated public utilities.

For purposes of the special form of relief in determining excess profits credit, public utilities include companies that furnish electric, gas, water, transportation, pipeline, telephone, and telegraph services. To be entitled to the relief, however, a company must be under the regulatory jurisdiction of a governmen-

tal body as to rates and derive at least 80 per cent of its gross income (exclusive of dividends and capital gains and losses) for the taxable year from the aforementioned services.

The Special Method

As previously indicated, the excess profits credit is computed generally either on the earnings method or on the invested capital method, whichever credit results in the lesser excess profits tax. Notwithstanding that general rule, a regulated public utility may compute its credit on the earnings method, the invested capital method, or under the special method to be discussed presently, whichever results in the smallest excess profits tax. A public utility is not required to make any election for use of the special method. The application of that special method, if resulting in the smallest excess profits tax, is automatic.

The special method provides an excess profits credit consisting in general of the sum of federal income taxes and a fixed percentage rate of the sum of adjusted invested capital and average borrowed capital, subject to certain adjustments. In the case of electric and gas utilities and certain other utilities, that rate is 6 per cent. In the case of telephone and telegraph utilities and air transportation companies, the rate is 7 per cent. Adjusted invested capital in the case of electric and gas utilities is the sum of average outstanding common and preferred capital stock accounts and surplus accounts, capital and earned, all as recorded on taxpayer's books. In the case of certain other utilities, adjusted invested capital means in the main invested capital determined on the asset approach.

Historical Invested Capital

In any event, adjusted invested capital in the case of all utilities, for purposes of the special alternative method, does not include historical invested capital. As has been seen, the taxpayer must specially elect to compute its invested capital on the historical invested capital approach. Consequently, if a public utility is to have the benefits of historical invested capital, its credit cannot be under the special method.

It is not to be understood, however, that once having merely elected to use historical invested capital for any year, a regulated public utility cannot have its credit computed under the special method for that year. The utility is still entitled to obtain the smallest tax available to it under any method of determining the excess profits credit. Whether a regulated public utility should elect to use historical invested capital, as against the asset approach in determining its invested capital credit, will, of course, depend upon the facts in each instance. Hence, if there appears to be no doubt, or extremely little doubt, that historical invested capital would give rise to a tax larger than that resulting from the use of the income credit, the asset approach of computing invested capital or the special method available to utilities, there would appear to be no sound basis for electing historical invested capital.

An Election Is Proper

If, on the other hand, there would seem to be some ground for believing that ultimately historical invested capital might be large enough to result in the lowest excess profits tax, it would seem an election is proper to protect the utility's right to the use of historical invested capital. The utility will suffer no harm from such election in so far as the application of the earnings method or the special method is concerned. The election will naturally prevent computation of invested capital on the asset value approach, but whether that prohibition is of any material consequence will again depend upon the particular facts at hand.

Reorganizations and Liquidations

As under the World War II law, there are provisions dealing with the computation of the excess profits credit where there have been tax-free reorganizations and exchanges and also various forms of intercorporate liquidations. The benefits of those provisions are available to regulated public utilities, as well as to taxpayers generally. If, however, even after tax-free reorganizations and intercorporate liquidations, a regulated public utility finds that the special method of determining excess profits credit results in the smallest amount of tax, that method takes precedence over the provisions relating to such reorganizations and liquidations.

Freedom for Human Energy

A FEW days ago, a group of students and engineers gathered in a North Carolina town for a meeting sponsored by the American Society of Mechanical Engineers. There were the usual welcomes, speeches, awards, business meetings, but in the course of one address, the men heard this startling fact:

"Electricity costs four cents per horsepower-hour compared to $10 per horsepower hour for human muscles."

Here—in cold dollars and cents figures—was an economic explanation for this nation's great swing to mechanization. In most industrial plants, the use of human energy and muscle-power for routine jobs like materials handling is a flagrant waste of money and, more important, a waste of one of our nation's greatest resources. This resource is its alert, able manpower.

More Efficient Use of Manpower

When electric energy can handle a strictly "strong-back" job efficiently and at a saving of some $9.96 a horse-power hour, human energy and intellect is freed for the more exacting jobs requiring brain-power as well as muscle-power.

In our time of international crisis . . . a tremendous national preparedness program . . . and a threat of war which may continue for a decade, the wise use of manpower and electric power is vital. Experts also predict that the high cost of muscle power and a tightening manpower situation will force even more rapid technological advances. Industrially and economically, that able, energetic giant—electric power—will play a bigger and bigger role.

Social Result

Socially, the result will be greater and greater freedom for men and women. In America's future, muscle-power will fade from the industrial scene as such and individuals will be freed for jobs requiring the use of mind over the simple utilization of muscle.

From the May, 1951, issue of *Union Electric News*, published by the Union Electric Company of Missouri and its subsidiaries.

Why Count Kilowatts?

Electric Output Is One Where Supply by Definition Equals Consumption

One of a series of *Business Week* articles looking behind the statistics that go to make up BW's "Figures of the Week"

UNTIL someone invents a way to stockpile electric power, measuring it will be a relatively simple matter. There are no inventories, no products in transit to locate and count. Whatever is produced, except for line losses, is used instantly. Supply equals demand; if it doesn't, someone is in trouble.

Edison Electric Institute, which supplies the figure *Business Week* uses in Figures of the Week, does all the figure-gathering itself. *Business Week* publishes the EEI estimate untouched.

On Saturday Night

There's no trick to putting together a weekly set of electric power figures. Every Saturday midnight about 90 per cent of all the producers of power for public consumption look at their meters and wire or air-mail their week's output to EEI. The Institute then makes some adjustments, comes up with a final figure, and sends it out to *Business Week*, among others. The principal adjustment is the estimate of production of those very small producers who don't report to the Institute. EEI says its calculations come within 1 per cent of the exact total.

Figure of the Week

The final figure—the Figure of the Week—is actually "net energy for distribution" as contrasted with "total generation" or "sales to ultimate consumers."

In order to get net energy from total generation, any additional power imported across international boundaries must be added, and any power used by producer and distributor companies on their own must be subtracted. If Consolidated Edison lights its own lights with the power it makes, that power will appear in the total generation column, but it won't be available for distribution.

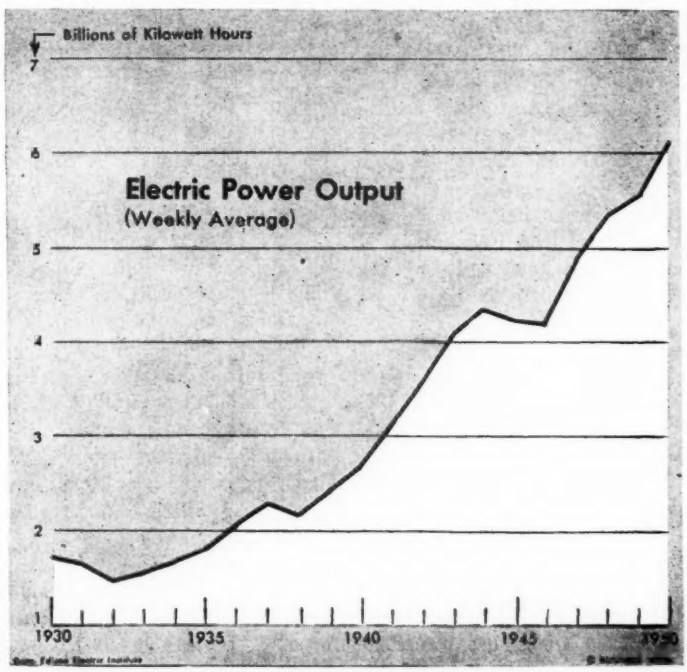
Energy available for distribution, however, isn't exactly the same as sales to consumers. Line losses and other, sometimes unaccountable, factors make the two differ. For various reasons the total amount of power put in the pipe at the production end doesn't get to the consumer; some of it leaks out along the line. That's not the way an electric power man would put it, but it's roughly what happens.

The unit that's used to measure power output is the kilowatthour. A kilowatt is equal to 1000 watts. A watt (named after the steam engine inventor, James Watt) is the standard unit of power in the metric system. It measures the same thing as the horsepower. In fact, 746 watts or 0.746 kw equals one horsepower.

The capacity of a generator in kilowatts tells how fast it can put out electricity. The total energy produced over a period of time is measured in kilowatt-hours. A 25,000-kw generator operated at full output for two hours will produce 50,000 kwhr.

For most purposes you can simply consider the kilowatthour figure as the amount of electric power produced or distributed.

But even though you know how much electric power was produced during a given week, you still don't know the whole story, and what it means. The weekly figure supplied by Edison Electric Institute doesn't break down power distribution among classes of users. Thus a look at output figures as they appear in Figures of the Week will tell how well the power and light companies are doing. It will also give a pretty good idea of the amount of general activity, both industrial and commercial, of the economy. But it won't tell how much each of the three major users—industrial, commercial, or residential—is doing in



Only three times since 1930 has power production broken its growth stride

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terms of power consumption.

There's good reason why total power production isn't much good as a short-run index to industrial output, even though industrial users take about half of all power produced. Total power demand is governed by a lot of non-economic, almost unreasonable factors.

The week of highest output, for instance, is almost always the week before Christmas each year. Industrial production is generally going at a high rate. But the real reasons for the high consumption are Christmas lighting, plus less daylight.

Other Examples

The year 1949 was another case where the output figure proved a poor industrial index. Power output for almost every week in 1949 exceeded 1948, which in most respects was a much better year for industry.

The first week of February this year was the highest week in the power industry's history. Output was 7,099,385,000 kwh. It even beat last Christmas by about 66-million kwh. But the peak didn't have much to do with industrial production, commercial volume, or even home lighting. It was caused by a nationwide cold wave.

A cold wave in the North wouldn't have done much to power demands. It would simply have meant more coal, oil, or gas was burned. But when it hit the entire country, it chilled areas where few buildings have central heating. That meant a lot of electric space heaters were turned on from Kentucky to Key West. Producing heat takes more juice than turning wheels or lighting rooms. So the week's output figure hit the sky without any extra help from industrial customers. But the total figure for the week didn't show where the boost came from.

A long-term view of the figure yields more information. Since 1920, power output has fallen off four times: in 1921, from 1930 to 1932, in 1938, and in 1945. These were all periods when industrial production fell off, so industry's dent does figure to some extent in the totals. But in no case was electric power output off by anywhere near the same percentage as production in general. People still lighted their homes even when plants were shut tight, and plenty of stores stayed open.

The power and light industry has been growing by giant steps almost since the day of its birth back in 1882, when Edison opened the first central station in downtown New York.

During the past 20 years, output of the industry has more than trebled, as an average of the Figure of the Week shows. (See accompanying graph.) And in the decade before that, output more than doubled.

But the figures don't tell why. They don't show the great advantages of electric power — transferability, flexibility, low cost, control. They do hint at its major disadvantage, the fact that it can't be stored. The lack of difference between production and consumption figures, except line losses, indicates that it has to be used as fast as it is produced.

If you go to figures other than *Business Week's* Figure of the Week, you can find out a lot more about the electric industry's characteristics. Comparing cost figures over the years shows one of the major economic truisms of the industry—that the more power that's produced, the cheaper it is to produce.

If you examine figures covering peak loads, load factors, and generating capacity, you can spot another major fact about the industry — that hour-by-hour demand is in no way uniform. Just the same, power producers have to be equipped to supply the peak demand, lasting for only a few minutes of the day, even though it means excess capacity a good share of the time.

New Customers Take Up Reserve

But if you look at reserve capacity—that in excess of peak load—you can see that this situation is changing, too. Power and light companies have been, and still are, offering special rate concessions to users who will buy most or all of their power during off-peak hours, thus helping to fill in the traditional troughs between the peaks.

Besides, demand in general has been rising during the past six years at a greater rate than capacity. So a lot of the reserve has been taken up by new customers. Present reserves are now down somewhere near 10 per cent.

Years ago that would have been considered dangerously low. As a matter of fact, even now power producers are shying from any big sales campaigns to get new customers. But they aren't so worried as they would have been 15 years ago.

That's because of the vast network of interconnecting transmission lines, which can get power from surplus capacity areas to needy areas automatically and immediately. One chain runs from the Great Lakes down to the Gulf and is crossed by a link connecting western Texas installations with Florida. Besides this, there are a number of regional connections in New England, between Pennsylvania and New Jersey, and elsewhere. In addition to helping out in emergencies, some of the smaller systems cooperate on a day-to-day basis.

If one of two connected power companies has its peak in the morning and the other gets its big load in the afternoon, they can support each other every day. Neither needs to carry anywhere near as much reserve generating equipment as it might if they weren't linked.

Since the power industry serves the public and is government-regulated, it makes available all kinds of figures on its operations, from average bill per customer to coal costs per kilowatthour. Edison Electric Institute, which is the trade association of the private power and light companies, supplies a good share of the statistics on all companies, both private and public, which contribute to the public supply.

In addition, various branches of the government issue statistics. The Federal Power Commission keeps them for everything in its domain. The Rural Electrification Administration covers farm power use and production facilities. TVA puts out others.

But even though it is as sensitive to a cloudy week in Chicago, or a cold snap in Chattanooga, as it is to industrial production, the Figure of the Week is a good takeoff point for power statistics.

Lighting Handbook Winners

DELEGATES to the 17th Annual EEI Sales Conference took part in a drawing sponsored by the Illuminating Engineering Society. Prizes were copies of the second edition of the IES Lighting Handbook, to be published in October. Winners were:

L. O. Buckner, Metropolitan Edison Co., Reading, Pa.

Don Bootes, Dayton Power and Light Co., Dayton, Ohio.

W. B. Bertolet, Metropolitan Edison Co., Reading, Pa.

J. A. Mahr, Indianapolis Power and Light Co., Indianapolis, Ind.

R. K. Lothrop, Southwestern Gas and Electric Co., Shreveport, La.

PERSONALS

R. Roy Dunn, Potomac Electric Power Co., has been elected president, succeeding Alfred G. Neal, who will retire from the company in September.

Born in Cleveland, Ohio, in 1901, Mr. Dunn has been vice president and treasurer of the company since 1947. Prior to joining PEPCo in 1942, he was on the staff of the Securities and Exchange Commission for seven years.

His background also includes experience with several consulting engineering firms. Mr. Dunn is a past president of the Maryland Utilities Association.

Mr. Neal, born in Maryland in 1886, was first employed by PEPCo as assistant comptroller in 1918. Elected comptroller in 1919 and vice president and comptroller in 1925, he was made vice president and general manager in 1933 and president in 1939. Mr. Neal has also served as Chairman of the Board of Directors since 1948.

Harold G. Haydon has been elected vice president and treasurer of the company. Mr. Haydon has been vice president and comptroller since 1946, and in addition to his new responsibilities he will continue to be PEPCo's chief accounting officer.

Charles L. Carr has been named comptroller to succeed Mr. Haydon. Mr. Carr, who joined PEPCo in 1931, has been assistant comptroller since 1935.

Other PEPCo officers re-elected were James H. Ferry, executive vice president; George Bisset, vice president in charge of operations; William L. Jones, vice president in charge of personnel services; George M. Thompson, secretary and assistant treasurer; Miss Helen M. Martell and Edwin Detwiler, assistant secretaries; and E. Perry Knapp, assistant treasurer.

PEPCo has also announced the following organization changes:

Thomas C. Pearce has been appointed general superintendent, Electric System, and will direct the operations of the company's Distribution, Power Dispatcher's, Substation, Meter, Motor Transportation and Building Operations Departments. Mr. Pearce, who has been with the company 30 years, has been Superintendent of the Substation Department.

Wesley L. Hatton has been made superintendent of the Substation Department to succeed Mr. Pearce. He has been employed by PEPCo since 1919 and he has been serving as assistant superintendent of the Substation Department since 1941.

Mr. Dunn

Elwood G. McAfee has been made assistant superintendent, Substation Department, to succeed Mr. Hatton. With the company since 1923, he has been an operating foreman in the Substation Department since January, 1950.

John R. O'Hanlon has been made engineer assistant to the vice president in charge of operations. Mr. O'Hanlon, who has been with the company since 1936, is a graduate of Notre Dame University.

Fred W. Reeder has been made administrative assistant to the vice president in charge of operations. Mr. Reeder was first employed by PEPCo in 1924 and since 1942 he has been an administrative clerk in the Distribution Department.

C. B. McManus, president of the Southern Co. and administrator of the Defense Electric Power Administration, has been elected president of the Southeastern Electric Exchange, a trade association of electric companies of the southeastern states.

J. M. Oliver, former vice president in charge of operation, Georgia Power Co., has been advanced to vice president and general manager. Following graduation from Alabama Polytechnic Institute in 1915, Mr. Oliver was associated with the Alabama Power Co. in various engineering capacities before joining Georgia Power in 1927 as operating manager.

J. J. McDonough, formerly vice president and manager of Georgia Power's Atlanta division, has been named to the newly-created post of executive vice president. A graduate of Georgia Tech, Mr. McDonough has been associated with the company since 1927. He came to Atlanta last October from Rome, where he had been vice president and division manager since 1937.

George H. Brodnax, formerly assistant to the vice president in charge of sales, will succeed Mr. McDonough. After studying electrical engineering at Georgia Tech, Mr. Brodnax joined Georgia Power in 1925 as a steam heat engineer. When the company's Better Home Towns program was instituted in 1944, he became field supervisor and later manager of the program.

The promotions of C. M. Wallace, Jr., from assistant to the vice president in charge of operation to sales manager and assistant to the vice president in charge of sales, and Robert Wardle, Jr., from manager of the community development division to assistant to the vice president and general manager, have also been announced.

Assistant to the vice president in charge of operation since 1950, Mr. Wallace joined Georgia Power in 1928 as a student engineer and was successively a power salesman and lighting engineer in Athens and division lighting engineer, senior salesman, and sales supervisor in Atlanta.

A graduate of Georgia Tech, Mr. Wardle joined the company in 1934 and served as lighting engineer, power sales engineer, and general sales representative in Atlanta. Since 1948 he has directed the company's Better Home Towns and Community Development programs.

Thomas H. Haines has been appointed vice president and associate director of engineering, steam, and electric operations of the Boston Edison Co.

He became associated with the company in 1913 as assistant superintendent of what is now known as the transmission and distribution department. After serving as superintendent of this department, he became assistant vice president in 1941. He was later coordinator of management personnel, in charge of setting up procedure to keep management better informed on company policy and

industry activities. Since 1948 he has served as staff assistant to J. T. WARD, vice president in charge of engineering and operations.

MILTON J. PFEIFFER has been elected vice president of The Cincinnati Gas and Electric Co. Mr. Pfeiffer, a graduate of the University of Wisconsin, joined the company in 1927 as assistant superintendent of the gas distribution department. At the time of his recent election, Mr. Pfeiffer held the position of manager of the gas production and transmission department.

HARRY M. MILLER, who recently resigned as a member of the Ohio Public Utilities Commission, has been elected vice president of the Columbus and Southern Ohio Electric Co.

Mr. Miller is a graduate of Ohio Wesleyan University and Ohio State University College of Law. He was executive secretary of Ohio's Governor John W. Bricker, 1939-1941, and served on the Public Utilities Commission, 1941-1951. He was also president of the state commission, 1947-1949, and president of the National Association of Railroad and Utility Commissioners for the year of 1950.

ALFRED S. WALKER has been elected vice president of the New England Power Co., succeeding CLIFFORD R. OLIVER, who has retired.

Mr. Walker will take charge of the operating and maintenance departments of the wholesale companies of the New England Electric System. He was formerly assistant vice president of New England Power, Connecticut River Power, and Bellows Falls Hydroelectric, posts he has held since 1943.

Mr. Walker was associated with the Power Construction Co. in erecting hydroelectric plants on the Deerfield River for New England Power in 1912. He joined the Connecticut River Transmission Co. in 1913 and in 1921 became superintendent of the company's eastern division.

Mr. Oliver, who has been vice president since 1943, joined what is now the New England Electric System in 1912, and was active in the electrical engineering phase of New England Power's hydro developments on the Deerfield River.

M. G. MILLER has been appointed assistant vice president of the West Penn Electric Co. of New York. Assistant comptroller of the West Penn Power Co. since 1939, Mr. Miller has been with that company since 1922.

DONALD M. KAMMERT, formerly assistant comptroller of the West Penn Electric Co., has been made comptroller of the West Penn Power Co. After service with the American Water Works and Electric Co., the then parent company of West Penn Electric and West Penn Power, Mr. Kammert was appointed assistant comptroller of West Penn Electric in 1948. In addition to his duties at West Penn Electric, he has also served as an assistant secretary and an assistant treasurer of West Penn Power since 1946.

NOEL B. HINSON, vice president and executive engineer of Southern California Edison Co., has retired after 44 years of service. He joined the company in 1906 as a testman, was appointed distribution engineer in 1913, and became planning engineer and chairman of the company's planning committee in 1923. A system of analysis of population and load growth in relation to system requirements, initiated by him, is still used.

He held the posts of assistant manager of operation, chief engineer, and executive engineer prior to his appointment as vice president in 1945.

WILLIAM K. NEWELL has retired from Consolidated Edison Co. of New York, Inc., after 45 years of service. He had been assistant to Vice President JOHN STILWELL, who also retired recently, since 1932 and assistant secretary of the company since 1935.

Mr. Newell began his utility career with Consolidated Gas in 1906 as a helper, became chief clerk of the newly organized payroll department in 1914, and in 1928 was appointed manager of the department. He was active in the Con Gas Mutual Aid Society, serving as a member of its Board of Managers and as vice president of the organization. In 1928 he became assistant secretary of Green Mountain Lake Farms, a convalescent home maintained for its employees by Consolidated Edison.

CLIFFORD R. BEARDSLEY, director of the industrial and economic development department of Consolidated Edison Co. of New York, Inc., has retired after 27 years with the company. In 1923, Mr. Beardsley joined the Brooklyn Edison Co., subsequently merged into Consolidated Edison, as superintendent of electrical construction and was later appointed superintendent of distribution. With Consolidated Edison he became manager of the contract control and inspection department in 1938, and in 1946 he was made head of the industrial and economic development department. Prior to joining the Brooklyn Edison Co., he was associated with the General Electric Co., the United Illuminating Co., and Fred T. Ley and Co.

PAUL J. W. MILLER and HAROLD W. NICHOLS have been elected secretary and treasurer, respectively, of the Rochester Gas and Electric Corp. Mr. Miller has been serving as assistant secretary and Mr. Nichols as assistant treasurer and their promotions followed the retirement of FREDERICK H. PATTERSON, secretary-treasurer, after 41 years of service with the Rochester utility. Mr. Patterson had been in office for more than 38 years, secretary for more than 18 years and treasurer for 10 years.

Mr. Miller has been with Rochester Gas and Electric for 37 years, filling various posts in the auditing and accounting departments.

Mr. Nichols entered the utility accounting field 28 years ago with the New York State Electric and Gas Corp. of Ithaca, N. Y. He joined the Rochester company in 1930 as auditor and has served as assistant treasurer since 1941.

Both men are active members of the accounting sections of the American Gas Association and the Edison Electric Institute.

It was also announced that HAROLD S. WEATHERBY, in addition to retaining his title of assistant secretary, will assume the duties of superintendent of general accounting.

HOWARD R. CRESSMAN has been elected assistant secretary of the Philadelphia Electric Co. He succeeds P. A. WILSON, who will retire after 50 years' service with the utility. Mr. Cressman has been with Philadelphia Electric since 1911.

GEORGE G. HANEL has been named advertising manager of the Connecticut Light and Power Co. He joined the public relations department in 1944 after experience in the company's accounting and operations departments. Mr. Hanel is secretary of the Public Utilities Advertising Association.

ROY S. ALLISON has been named manager of the commercial department of the Genesee and Ontario districts of Niagara Mohawk Power Co. Mr. Allison was formerly vice president of Niagara, Lockport and Ontario Power Co., which merged with Niagara Mohawk.

C. MYRON LYTLE, manager of Engineering, Kansas City Power and Light Co., has been named a Fellow in the American Institute of Electrical Engineers. Mr. Lytle, whose first job with the utility was as a clerk, is also a first vice president of the Missouri Society of Professional Engineers.

R. W. MAVITY has been named assistant to the chief engineer of Duquesne Light Co. At the same time, it was also announced that J. STANLEY BROWN has been appointed electrical engineer and SAMUEL ROSENBACH, assistant electrical engineer.

A graduate of Purdue University, Mr. Mavity gained experience with power companies in the Midwest and in the South, before joining Duquesne Light Co. in 1922 as assistant design engineer. Since that time he has been assistant electrical engineer of transmission and distribution, and assistant electrical engineer. He also served in the 86th Division, U. S. Army, in France in 1918-19.

Mr. Brown has been electrical station engineer in charge of all Duquesne Light Co. power station and substation electrical engineering and design since 1945. During World War I, Mr. Brown, serving in the U. S. Naval Reserve, was assigned to experimental and redevelopment radio work on underground and underwater systems of radio transmission and reception. Following the war he served as engineer with various electrical construction and electric utility firms throughout the country before coming to Pittsburgh in 1937. Mr. Brown succeeds F. S. BROWN, who died on March 4, following 40 years of continuous service with the Duquesne Light Co.

Mr. Rosenbach has been very active in transmission and distribution engineering and operating since joining Duquesne Light Company in 1922. He was graduated from the University of New Mexico and was later a Research Fellow at Carnegie Tech, where he also taught in night school classes. At the time of his appointment he was general engineer in the electrical engineering department.

High Cost of Food—*Low Cost of Cooking*

"IT takes $23.74 to buy the groceries that a $10 bill used to buy before World War II," according to Mrs. Aryness Joy Wickers, Deputy Commissioner of Labor Statistics. With the ten dollars, the following market baskets of food could have been procured in 1941, as compared with the present (February) time:

	1941	*1951*
MEATS:	6 pound rib roast	3 pound rib roast
	2 pounds bacon	1 pound bacon
	2 pounds veal cutlets	1 pound veal cutlet
	2 pounds pork chops	1 pound pork chops
DAIRY:	7 quarts of milk	4 quarts of milk
	2 pounds butter	1 pound butter
	1 pound cheese	⅛ pound cheese
	2 dozen eggs	1 dozen eggs
VEGETABLES:	15 pounds potatoes	7 pounds potatoes
	5 pound head cabbage	3 pound head cabbage
	3 pounds green beans	2 pounds green beans
	3 pounds onions	One half as much
	3 pounds apples	
	2 cans tomatoes	
	2 bunches carrots	
	2 cans peas	
	1 head lettuce	
FRUITS:	24 oranges	13 oranges
	1 can peaches	½ can peaches
	1 box dried prunes	⅛ box prunes
MISCELLANEOUS:	10 pounds flour	4 pounds flour
	5 pounds sugar	3 pounds sugar
	1 pound coffee	⅛ pound coffee
	1 pkg. rolled oats	⅔ pkg. rolled oats
	1 can salmon	½ can salmon
	2 loaves bread	1 loaf bread

If it took 20 kilowatthours of electricity to keep, prepare, and cook this food in 1941, the cost, at the nationwide average price of 3.73 cents per kilowatthour, would have been 75 cents. In 1951, the nationwide average had dropped to 2.87 cents per kwhr, and the same amount of electricity would now cost the housewife only 57 cents. While the cost of the food has more than doubled since pre-war days, the cost of its preparation has declined by over 20 per cent.

The Pacific Gas and Electric Co. has announced several new appointments, following the retirement of four executives.

W. R. JOHNSON has been named chief of the division of hydroelectric and transmission engineering, succeeding JOHN A. KOONTZ. Assistant to Mr. Koontz since 1948, Mr. Johnson helped develop the 2-million-v generator at Ryan high-voltage laboratory, Stanford University. Mr. Koontz worked on the design of the Great Western Power Company's Caribou and Big Ben power houses and later served with PG and E as assistant in the hydroelectric and transmission division before becoming chief.

A. J. SWANK will replace OTTO W. PETERSON, manager of the general construction department for 30 years. Mr. Swank, who joined the company in 1919, has been construction superintendent, engineer of station construction, and assistant manager of the general construction department. Mr. Peterson directed building of the "Super Inch" pipe line for PG and E.

H. D. WRIGHT with the company since 1919, has been appointed engineer of line construction, succeeding R. A. RANSDALL, who has served PG and E as superintendent of the construction department substation division, assistant engineer of line construction, and, since 1942, engineer and division head.

E. V. NOE, with the company since 1925, will become chief of the bureau of specifications and estimates, succeeding FRANK M. HARRIS, who joined the company in 1920.

HOMER G. KEESLING, who joined the company in 1911 and has been superintendent of the central area since 1947, is also retiring.

CONVENTIONS AND MEETINGS

1951

MAY

2-4 AIEE Northeastern District Meeting, Syracuse Hotel, Syracuse, N. Y.
3-4 EEI Hydraulic Power Committee, Tapoco Lodge, N. C.
3-4 Pennsylvania Electric Association, Communications Committee, Bedford Springs Hotel, Bedford, Pa.
4 New Jersey Utilities Association, Spring Meeting, Seaview Country Club, Absecon, N. J.
7-8 EEI Prime Movers Committee, Hotel Skirvin, Oklahoma City, Okla.
7-9 Northwest Electric Light & Power Association, Business Development Section, Multnomah Hotel, Portland, Ore.
7-9 Joint Meeting, EEI Meter & Service Committee and AEIC Committee on Metering & Service Methods, Huntington Hotel, Pasadena, Calif.
7-11 National Fire Protection Association Annual Meeting, Hotel Statler, Detroit, Mich.
9 EEI Commercial Electric Cooking Conference, Sheraton Hotel, Chicago, Ill.
10-11 Pennsylvania Electric Association, Joint Spring Meeting of Transmission and Distribution Committee and Electrical Equipment Committee, Abraham Lincoln Hotel, Reading, Pa.
11 EEI Insurance Committee, Hotel Statler, New York, N. Y.
15-16 EEI Rural and Urban Development Conference, Warwick Hotel, Philadelphia, Pa.
16 ECAP Copy Group Meeting, New York, N. Y.
16-18 Northwest Electric Light & Power Association, Personnel Section, Davenport Hotel, Spokane, Wash.
17-18 National Industrial Conference Board, 35th Annual Meeting, Waldorf-Astoria, New York, N. Y.
17-18 Missouri Valley Electric Association, Accounting Conference, President Hotel, Kansas City, Mo.
17-19 AIEE Great Lakes District Meeting, Hotel Loraine, Madison, Wis.
17-19 Public Utilities Advertising Association Annual Meeting, Hotel New Yorker, New York City, N. Y.
18 National Association of Electric Companies Annual Meeting, Mayflower Hotel, Washington, D. C.
20-27 Week of National Association of Electrical Distributors, Atlantic City, N. J.
21-22 EEI Accident Prevention Committee, Hotel Utah, Salt Lake City, Utah.
21-23 Missouri Association of Public Utilities, Annual Convention, Jefferson Hotel, St. Louis, Mo.
21-23 Pacific Coast Electrical Association, Annual Convention, Biltmore Hotel, Los Angeles, Calif.
25 PIP West North Central Group, Milwaukee, Wis.
28-29 EEI Electrical Equipment Committee, Hotel Biltmore, Los Angeles, Calif.

JUNE

4 EEI Industrial Relations Committee, Denver, Colo.
4-7 EDISON ELECTRIC INSTITUTE, Nineteenth Annual Convention, Denver, Colo.
11-15 ASME Semi-Annual Meeting, Royal York Hotel, Toronto, Ontario.
13-16 ASCE Summer Meeting, Louisville, Ky.
14 Illuminating Engineering Society, National Council, New York, N. Y.
14-15 Northwest Electric Light & Power Association, Accounting Meeting, Boise Hotel, Boise, Ida.
15 PIP Mid-Atlantic Group, Safe Harbor, Pa.
18-19 International Association of Electrical Inspectors, 18th Meeting of Virginia Chapter, Monticello Hotel, Charlottesville, Va.
18-21 Canadian Electrical Association, Annual Convention, Algonquin Hotel, St. Andrews, New Brunswick.
22 PIP Steering Committee, Stevens Hotel, Chicago, Ill.
22-23 ASME West Coast Applied Mechanics Conference, Stanford University, Calif.
24-27 Michigan Electric Light Association Annual Convention, Mackinac Island, Mich.
25-29 ASME Oil and Gas Power Division Conference, Baker Hotel, Dallas, Tex.
25-29 AIEE Summer General Meeting, Royal York Hotel, Toronto, Ontario.

JULY

2-4 American Society of Heating & Ventilating Engineers, Semi-Annual Meeting, Portland, Ore.
11 ECAP Management Group, Blackstone Hotel, Chicago, Ill.
12 PIP East North Central Group, Detroit, Mich.

AUGUST

20-23 American Institute Electrical Engineers, Pacific General Meeting, Multnomah Hotel, Portland, Ore.
27-30 Illuminating Engineering Society, National Technical Conference, Hotel Shoreham, Washington, D. C.

SEPTEMBER

9-12 Rocky Mountain Electrical League Fall Convention, La Fonda Hotel, Santa Fe, N. M.
10-14 Joint ASME Industrial Instruments & Regulators Division, and Instrument Society of America, Exhibit and Conference, Houston, Texas.
20-21 PIP Second Annual Workshop Conference, Edgewater Beach Hotel, Chicago, Ill.
24-26 ASME Petroleum Mechanical Engineering Conference, Hotel Mayo, Tulsa, Okla.
25-28 ASME Fall Meeting, Hotel Radisson, Minneapolis, Minn.

OCTOBER

1-2 EEI Prime Movers Committee, Statler Hotel, Buffalo, N. Y.
1-2 Iowa Utilities Association, Management Conference, Fort Des Moines Hotel, Des Moines, Ia.
1-3 International Association of Electrical Inspectors, Eastern Section, Chalfonte-Haddon Hall, Atlantic City, N. J.
8-9 EEI Electrical Equipment Committee, New Orleans House, Swampscott, Mass.
8-12 39th National Safety Congress and Exposition of National Safety Council, Chicago, Ill.
9-10 National Farm Electrification Conference, Gibson Hotel, Cincinnati, Ohio.
10-11 Transmission and Distribution Committee, Sheraton Hotel, Rochester, N. Y.
10-12 Indiana Electric Association Annual Convention, French Lick Springs Hotel, French Lick, Ind.
11-12 ASME Fuels—AIME Coal Conference, Roanoke, Va.
15-17 American Gas Association Annual Convention, Kiel Auditorium, St. Louis, Mo.
16-19 National Association of Railroad and Utilities Commissioners, Francis Marion Hotel, Charleston, S. C. (Executive Meeting, Oct. 15).
22-24 American Standards Association, 33rd Annual Meeting, Waldorf Astoria, New York, N. Y.
22-25 ASCE New York Convention, New York, N. Y.
22-26 AIEE Fall General Meeting, Hotel Cleveland, Cleveland, Ohio.

NOVEMBER

12-15 NEMA, Haddon Hall, Atlantic City, N. J.
25-30 ASME Annual Meeting, Chalfonte-Haddon Hall, Atlantic City, N. J.
29-30 Pacific Coast Electrical Association, 2nd Annual Hawaiian Conference, Royal Hawaiian Hotel, Honolulu, T. H.

DECEMBER

20 Electrical and Gas Association of N. Y., Inc., Christmas Luncheon, Grand Ballroom, Hotel Astor, New York, N. Y.

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EDISON ELECTRIC INSTITUTE OFFICERS AND COMMITTEES

OFFICERS

L. V. SUTTON, *President*.....Carolina Power and Light Co., Raleigh, N. C.
H. B. BRYANS, *Vice President*.....Philadelphia Electric Co., Philadelphia, Pa.
H. S. BENNION, *Vice President and Managing Director*...420 Lexington Avenue, New York, N. Y.
K. B. CRUMB, *Treasurer*.....American Gas & Electric Service Corp., New York, N. Y.
MAE B. WOODS, *Secretary*.....420 Lexington Avenue, New York, N. Y.

BOARD OF DIRECTORS

(Terms Expiring 1951)

J. M. BARRY,.....Alabama Power Co., Birmingham, Ala.
STUART COOPER .....Delaware Power and Light Co., Wilmington, Del.
GEORGE M. GADSBY.....Utah Power and Light Co., Salt Lake City, Utah
D. E. KARN.....Consumers Power Co., Jackson, Mich.
J. E. LOISEAU.....Public Service Co. of Colorado, Denver, Colo.
D. C. LUCE.....Public Service Electric and Gas Co., Newark, N. J.
PAUL B. McKEE.....Pacific Power and Light Co., Portland, Ore.
C. B. McMANUS.....Georgia Power Co., Atlanta, Ga.
S. C. McMEEKIN.....South Carolina Electric & Gas Co., Columbia, S. C.
GROVER C. NEFF.....Wisconsin Power and Light Co., Madison, Wis.
P. H. POWERS.....West Penn Power Co, Pittsburgh, Pa.
HAROLD QUINTON .....Southern California Edison Co., Los Angeles, Cal.
J. B. THOMAS.....Texas Electric Service Co., Ft. Worth, Texas
JOHN T. WARD.....Boston Edison Co., Boston, Mass.
W. F. WYMAN.....Central Maine Power Co., Augusta, Maine

(Terms Expiring 1952)

W. C. BECKJORD.....The Cincinnati Gas & Electric Co., Cincinnati, Ohio
H. B. BRYANS.....Philadelphia Electric Co., Philadelphia, Pa.
H. C. CUMMINS.....Northern States Power Co., Minneapolis, Minn.
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IRWIN L. MOORE.....New England Electric System, Boston, Mass.
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HAROLD TURNER .....The Ohio Power Co., Canton, Ohio
G. W. VAN DERZEE.....Wisconsin Electric Power Co., Milwaukee, Wis.
FRANK M. WILKES..... Southwestern Gas & Electric Co., Shreveport, La.

(Terms Expiring 1953)

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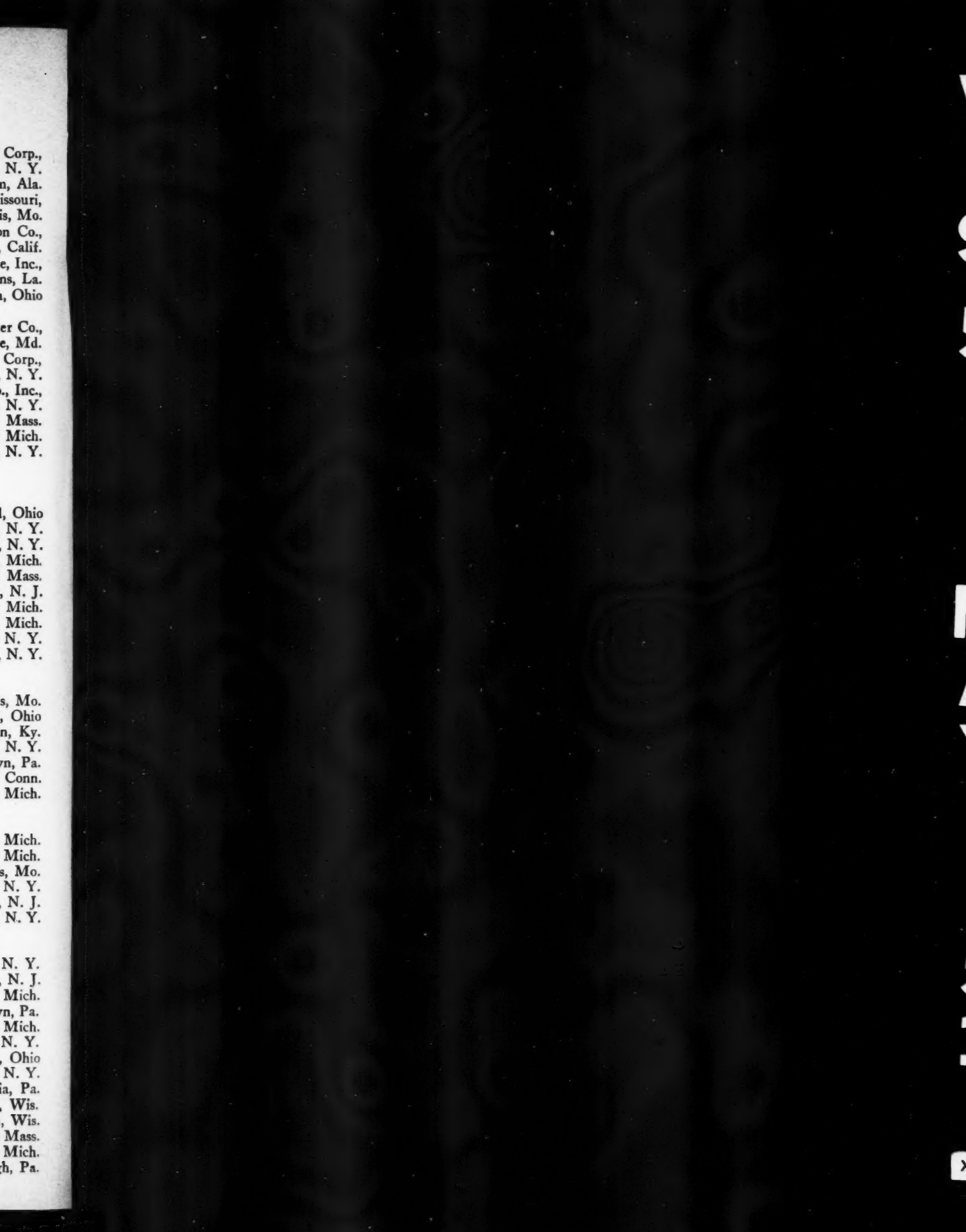
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